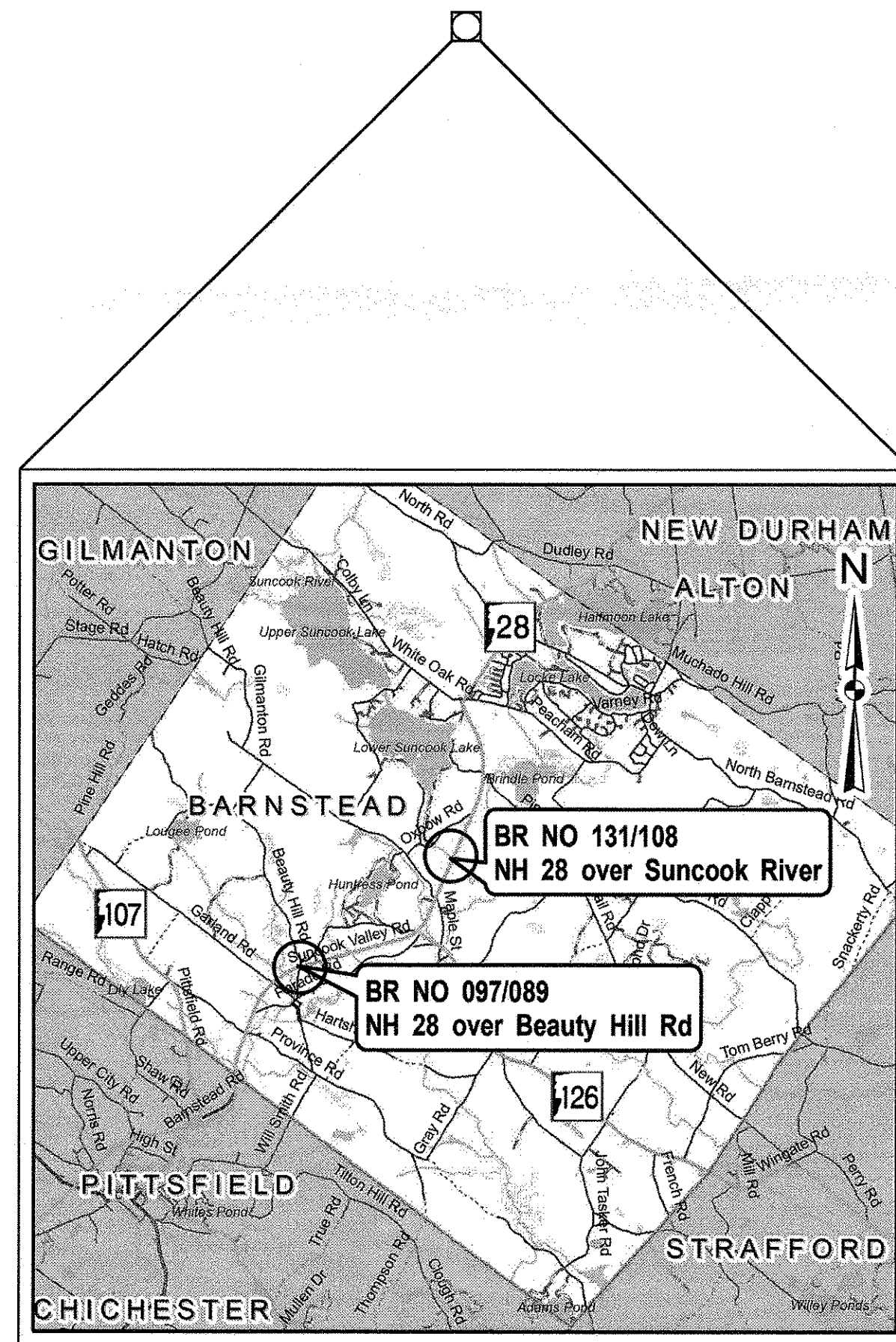


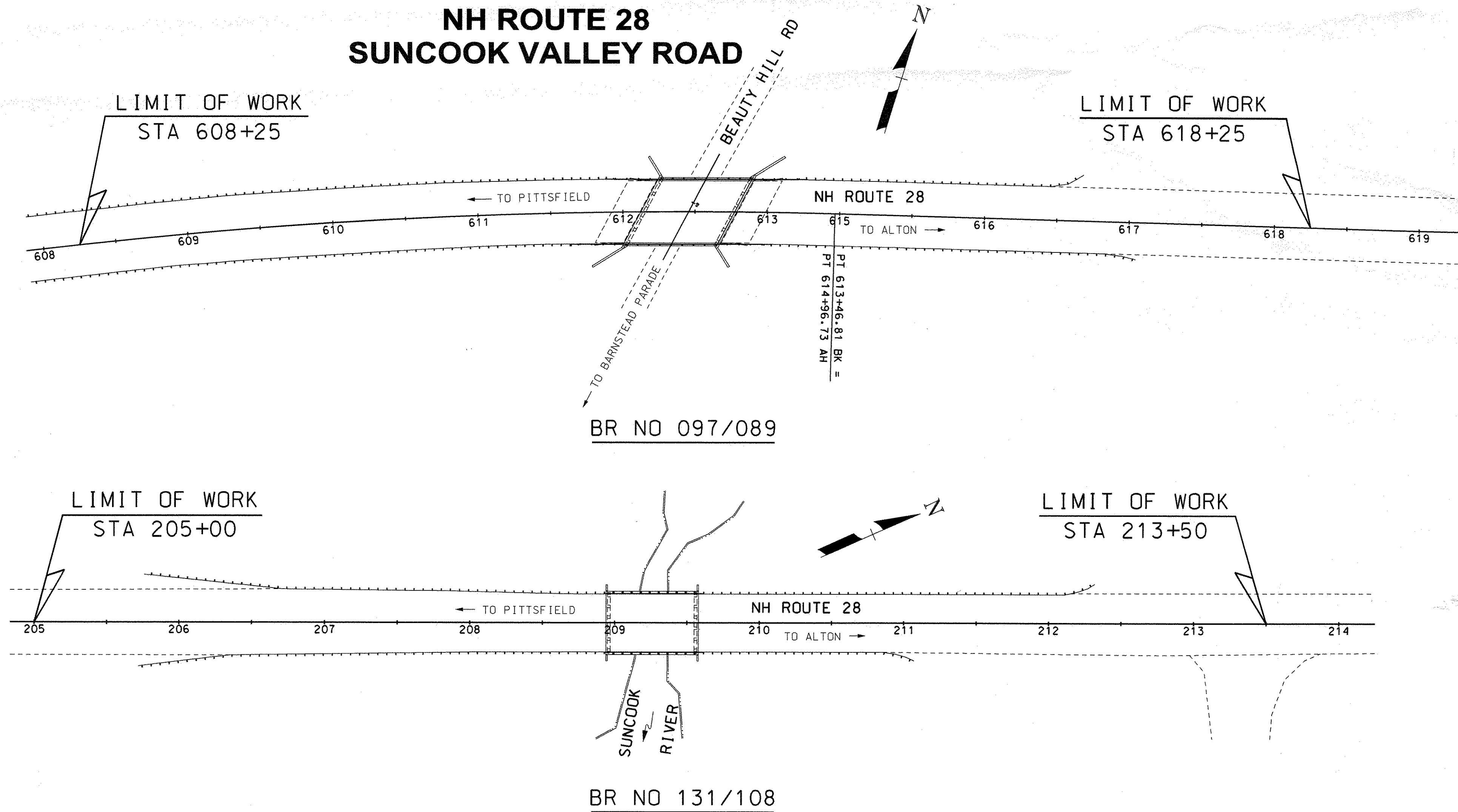
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
**CONSTRUCTION PLANS
PRESERVATION PROJECT**

**X-A004(591)
N.H. PROJECT NO. 41301
NH ROUTE 28
SUNCOOK VALLEY ROAD**

	DESIGN DATA	
	BR NO 097/089	BR NO 131/108
AVERAGE DAILY TRAFFIC 20 19	11,800 VPD	9,100 VPD
AVERAGE DAILY TRAFFIC 20 39	14,400 VPD	11,100 VPD
PERCENT OF TRUCKS	7%	7%
DESIGN SPEED	55 MPH	55 MPH
LENGTH OF PROJECT	850 LF	850 LF



LOCATION MAP

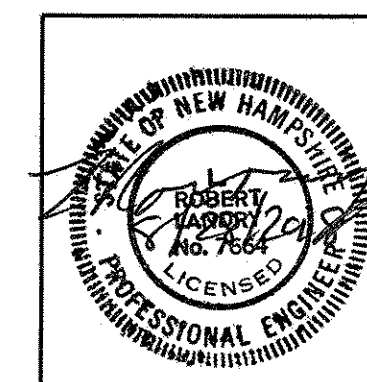


As-Built Plans

**TOWN OF BARNSTEAD
COUNTY OF BELKNAP**

SCALE: 1" = 50'

NHDOT THE STATE OF
NEW HAMPSHIRE
DEPARTMENT OF
TRANSPORTATION



RECOMMENDED FOR APPROVAL:
DIRECTOR OF PROJECT DEVELOPMENT
DATE: 8/23/2018
APPROVED: William Carr
ASSISTANT COMMISSIONER AND CHIEF ENGINEER
DATE: 8/27/18

DRAWING NAME	FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
41301fsc	X-A004(591)	41301	1	23

DRAWN BY: SMG
CHECKED BY: JAT
DATE: 9/17
DATE: 7/18

GENERAL NOTES

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	TITLE PAGE
2	INDEX OF SHEETS AND GENERAL NOTES
3.4	STANDARD SYMBOLS
5	NOTES AND QUANTITIES
BRIDGE PLANS	
6-14	BRIDGE NUMBER 097/089
15-18	BRIDGE NUMBER 131/108
CONCRETE BARRIER PLANS	
19-20	PORTABLE CONCRETE BARRIER
21-23	TEXAS RESTRAINED BARRIER (X-BOLT)

- 1

FOR STANDARD PLANS, SEE DEPARTMENT OF TRANSPORTATION WEBSITE AT: WWW.NH.GOV/DOT/ORG/PROJECTDEVELOPMENT/HIGHWAYDESIGN/STANDARDPLANS/INDEX.HTM.
- 2

HIGH TENSION OVERHEAD TRANSMISSION LINES ARE LOCATED THROUGHOUT THE PROJECT WITH CROSSINGS AT VARIOUS LOCATIONS AND RUNNING ALONG THE ROAD THROUGHOUT THE PROJECT EVEN ON REGULAR POLES. THE CONTRACTOR IS ADVISED THAT EXTREME CAUTION WILL BE REQUIRED IN THE OPERATION OF EQUIPMENT, ESPECIALLY CRANES AND PILE DRIVING EQUIPMENT.
- 3

MODIFY SUPERELEVATION ON EXISTING CURVES BY THE USE OF A LEVELING COURSE TO THE RATES INDICATED ON THE PLANS OR AS ORDERED.
- 4

EXISTING DELINEATORS AND WITNESS MARKERS THAT ARE REMOVED AND DETERMINED BY THE ENGINEER TO BE IN ACCEPTABLE CONDITION SHALL BE RESET (SUBSIDIARY). ADDITIONAL DELINEATORS AND WITNESS MARKERS ORDERED WILL BE PAID UNDER THE APPROPRIATE ITEMS OF THE CONTRACT.
- 5

NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.
- 6

PERFORM ALL WORK WITHIN THE EXISTING RIGHT-OF-WAY, UNLESS OTHERWISE SHOWN ON THE PLANS OR AS ORDERED BY THE ENGINEER.
- 7

REMOVE UNPROTECTED PROJECT MARKERS (SUBSIDIARY).
- 8

SURVEY DATA FOR THIS PROJECT WAS COLLECTED BY SDR AND THE FIELD NOTES CAN BE FOUND IN THE FIELD BOOK(S) _____. COORDINATES ARE NEW HAMPSHIRE STATE PLANE COORDINATES OF NAD83, ____ ADJUSTMENT AND THE BEARINGS ARE GRID. ELEVATIONS ARE REFERENCED TO ____ -_____.
- 9

QUANTITIES FOR EMBANKMENT AND EXCAVATION FOR SLOPE ROUNDINGS AS SHOWN ON THE TYPICALS HAVE NOT BEEN CALCULATED AND ARE NOT INCLUDED IN THE QUANTITY SUMMARIES, AND ARE CONSIDERED SUBSIDIARY TO THE APPROPRIATE 203 ITEMS.

THE FOLLOWING GENERAL NOTES WILL BE USED ON THIS PROJECT:											
1				5	6						

STATE OF NEW HAMPSHIRE				
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN				
INDEX OF SHEETS AND GENERAL NOTES				
REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
9-1-2016	index_sheet	41301	2	23

GENERAL

EDGE OF PAVEMENT
TRAVELED WAY

PROPOSED ROADWAY

existing roadway

(pavement removed outside slope lines)

DRIVEWAYS

(label surface type)

BUILDINGS

(label house or type of building)

FOUNDATION

(label type)

LEACH FIELD

leach field

BRIDGE CROSSINGS

STREAM

OVERPASS

STEPS AND WALK

(label type)

INTERMITTENT WATER COURSE

SHORE LINE

river/stream

pond (label name of water body)

POTENTIAL WET AREA SYMBOL

BRUSH OR WOODS LINE

(deciduous)(coniferous) (stump)

TREES (PLANS)

(show station, circumference in feet & type)

TREE OR STUMP (CROSS-SECTIONS)

HEDGE

(label type)

MONITORING WELL

mon

WELL

W

FLAG POLE

fp

ORIGINAL GROUND (TYPICALS)

ROCK OUTCROP

ROCK LINE (TYPICALS & SECTIONS ONLY)

GUARDRAIL (label type)

JERSEY BARRIER

CURB (LABEL TYPE)

STONE WALL

RETAINING WALL (LABEL TYPE)

FENCE (LABEL TYPE)

SIGNS

(single post)

(double post)

GAS PUMP

FUEL TANK (ABOVE GROUND)

STORAGE TANK FILLER CAP

SEPTIC TANK

GRAVE

MAILBOX

VENT PIPE

SATELLITE DISH ANTENNA

PHONE

GROUND LIGHT/LAMP POST

BORING LOCATION

TEST PIT

INTERSTATE NUMBERED HIGHWAY

UNITED STATES NUMBERED HIGHWAY

STATE NUMBERED HIGHWAY

SHORELAND - WETLAND

WETLAND DESIGNATION AND TYPE

DELINEATED WETLAND

ORDINARY HIGH WATER

TOP OF BANK

TOP OF BANK & ORDINARY HIGH WATER

NORMAL HIGH WATER

WIDTH AT BANK FULL

PRIME WETLAND

PRIME WETLAND 100' BUFFER

NON-JURISDICTIONAL DRAINAGE AREA

COWARDIN DISTINCTION LINE

TIDAL BUFFER ZONE

DEVELOPED TIDAL BUFFER ZONE

HIGHEST OBSERVABLE TIDE LINE

MEAN HIGH WATER

MEAN LOW WATER

VERNAL POOL

SPECIAL AQUATIC SITE

REFERENCE LINE

WATER FRONT BUFFER

NATURAL WOODLAND BUFFER

PROTECTED SHORELAND

INVASIVE SPECIES LABEL

INVASIVE SPECIES

FLOODPLAIN / FLOODWAY

500 YEAR FLOODPLAIN BOUNDARY

100 YEAR FLOODPLAIN BOUNDARY

FLOODWAY

ENGINEERING

CONSTRUCTION BASELINE

PC, PT, POT (ON CONST BASELINE)

PI (IN CONSTRUCTION BASELINES)

INTERSECTION OR EQUATION OF TWO LINES

ORIGINAL GROUND LINE (PROFILES AND CROSS-SECTIONS)

PROFILE GRADE LINE (PROFILES AND CROSS-SECTIONS)

CLEARING LINE

SLOPE LINE

SLOPE LINE (FILL)

SLOPE LINE (CUT)

PROFILES AND CROSS SECTIONS:

ORIGINAL GROUND ELEVATION (LEFT)

FINISHED GRADE ELEVATION (RIGHT)

SHEET 1 OF 2

STATE OF NEW HAMPSHIRE				
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN				
STANDARD SYMBOLS				
REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
11-21-2014	stdsyml1_2	41301	3	23

DRAINAGE

MANHOLE				
CATCH BASIN		(existing)		(PROPOSED)
DROP INLET				
DRAINAGE PIPE (existing)				(label size & type)
DRAINAGE PIPE (PROPOSED)				
UNDERDRAIN (existing) W/ FLUSHING BASIN		show direction of flow		(label size & type)
UNDERDRAIN (PROPOSED) W/ FLUSHING BASIN				
HEADER (existing & PROPOSED)				(with stone outlet protection)
END SECTION (existing & PROPOSED)				METAL or PLASTIC
				RCP
OPEN DITCH (PROPOSED)				
EROSION CONTROL/ STONE SLOPE PROTECTION				

BOUNDARIES / RIGHT-OF-WAY

	(label type)
RIGHT-OF-WAY LINE	— — — — —
RR RIGHT-OF-WAY LINE	— — — — —
PROPERTY LINE	— — — — —
PROPERTY LINE (COMMON OWNER)	— — — — —
TOWN LINE	— — — — — BOW CONCORD
COUNTY LINE	— — — — — COOS GRAFTON
STATE LINE	— — — — — MAINE NEW HAMPSHIRE
NATIONAL FOREST	— — — — —
CONSERVATION LAND	— — — — —
BENCH MARK / SURVEY DISK	— — — — —
BOUND	□ (PROPOSED)
STATE LINE/ TOWN LINE MONUMENT	□ S/L □ T/L
NHDOT PROJECT MARKER	△
IRON PIPE OR PIN	• ip
DRILL HOLE IN ROCK	• dh
TAX MAP AND LOT NUMBER	156 14 1642/341 6.80 Ac. ±
PROPERTY PARCEL NUMBER	12
HISTORIC PROPERTY	(H)






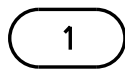


UTILITIES

	existing	PROPOSED
TELEPHONE POLE		 (plot point at face not center of symbol)
POWER POLE		
JOINT OCCUPANCY		
MISCELLANEOUS/UNKNOWN POLE		
GUY POLE OR PUSH BRACE		
LIGHT POLE		
LIGHT ON POWER POLE		
LIGHT ON JOINT POLE		
POLE STATUS: REMOVE, LEAVE, PROPOSED, OR TEMPORARY AS APPLICABLE e.g.:	 R L	 P+04 T+04 25.0' 25.0'
RAILROAD		
RAILROAD SIGN		
RAILROAD SIGNAL		
UTILITY JUNCTION BOX		
OVERHEAD WIRE		
UNDERGROUND UTILITIES		
WATER (on existing lines label size, type and note if abandoned)		
SEWER		
TELEPHONE		
ELECTRIC		
GAS		
LIGHTING		
INTELLIGENT TRANSPORTATION SYSTEM		
FIBER OPTIC		
WATER SHUT OFF		
GAS SHUT OFF		
HYDRANT		
MANHOLES		
SEWER		
TELEPHONE		
ELECTRICAL		
GAS		
UNKNOWN		

TRAFFIC SIGNALS / ITS

	EXISTING	PROPOSED
MAST ARM (existing)		
OPTICOM RECEIVER		
OPTICOM STROBE		
TRAFFIC SIGNAL		
PEDESTAL WITH PEDESTRIAN SIGNAL HEADS AND PUSH BUTTON UNIT		
SIGNAL CONDUIT		
CONTROLLER CABINET		
METER PEDESTAL		
PULL BOX		
LOOP DETECTOR (QUADRUPOLE)		
LOOP DETECTOR (RECTANGULAR)		
CAMERA POLE (CCTV)		
FIBER OPTIC DELINEATOR		
FIBER OPTIC SPLICE VAULT		
ITS EQUIPMENT CABINET		
VARIABLE SPEED LIMIT SIGN		
DYNAMIC MESSAGE SIGN		
ROAD AND WEATHER INFO SYSTEM		

CONSTRUCTION NOTES

CURB MARK NUMBER - BITUMINOUS	B-1
CURB MARK NUMBER - GRANITE	G-1
CLEARING AND GRUBBING AREA	
DRAINAGE NOTE	
EROSION CONTROL NOTE	
FENCING NOTE	
GUARDRAIL NOTE	
ITS NOTE	
LIGHTING NOTE	
TRAFFIC SIGNAL NOTE	

HEET 2 OF 2

STATE OF NEW HAMPSHIRE				
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN				
<i>STANDARD SYMBOLS</i>				
REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
9-1-2016	stdsymbl_2	41301	4	23

SCOPE OF WORK

1. BARNSTEAD BR NO 097/089
NH ROUTE 28 over BEAUTY HILL RD
 - REMOVE AND REPLACE DECK PAVEMENT AND MEMBRANE
 - FULL AND PARTIAL DEPTH DECK REPAIRS
 - REMOVE/ RECONSTRUCT BACKWALL AND DECK END, AND STUBWALL FOR EXPANSION JOINT
 - INSTALL COMPRESSION SEAL AT ABUTMENT B
 - RESET EXISTING NORTH GRANITE CURB AS DIRECTED OR AS REQUIRED
 - REMOVE EXISTING SOUTH GRANITE CURB AND REPLACE WITH CONCRETE CURB
 - INSTALL 6" CRACK SEAL AT ABUTMENT A
 - INSTALL SNOW FENCE
 - REPAIR SPALLS ON ABUTMENTS AND WINGS
2. BARNSTEAD BR NO 131/108
NH ROUTE 28 over SUNCOOK RIVER
 - REMOVE AND REPLACE DECK PAVEMENT AND MEMBRANE
 - FULL AND PARTIAL DEPTH DECK REPAIRS
 - INSTALL 6" CRACK SEAL AT BOTH ABUTMENTS
 - REPAIR SPALLS ON ABUTMENTS AND WINGS

MATERIALS AND SPECIFICATIONS

1. SPECIFICATIONS: AASHTO 2014, LRFD BRIDGE DESIGN SPECIFICATIONS
WELDING PER AASHTO/AWS D1.5-02 & NHDOT 2016 STANDARD
SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, AS AMENDED
2. REINFORCING STEEL: AASHTO M31 (ASTM A615) GRADE 60
AASHTO M31 (ASTM A615) GRADE 60 EPOXY COATED
3. CONCRETE: PARTIAL DEPTH DECK REPAIRS = 4000 psi
ITEM 520.01, CONCRETE CLASS AA
FULL DEPTH DECK REPAIRS, STUB WALLS, BACKWALL AND
END OF DECK RECONSTRUCTION = 4000 psi
ITEM 520.0201, CONCRETE CLASS AA, ABOVE FOOTINGS

TO THE CONTRACTOR

THE CONTRACTOR SHOULD BE AWARE THAT EXISTING STRUCTURE DIMENSIONS AND ELEVATIONS SHOWN ON THESE PLANS WERE TAKEN FROM ORIGINAL BRIDGE PLANS AND DO NOT NECESSARILY REPRESENT "AS BUILT" DIMENSIONS AND ELEVATIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURES AND BE PREPARED TO MAKE ANY ADJUSTMENTS REQUIRED TO PROPERLY REHABILITATE THE BRIDGE. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER, OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO ADVANCING THE WORK. THE EXISTING PLANS MAY BE VIEWED AT THE NHDOT, BUREAU OF BRIDGE DESIGN OFFICE DURING THE BIDDING PERIOD. AFTER THE CONTRACT IS AWARDED, A COMPLETE SET OF THE EXISTING PLANS WILL BE FORWARDED TO THE CONTRACTOR UPON REQUEST. THE FILE NUMBERS FOR THESE BRIDGES ARE FOUND IN THE GENERAL CONSTRUCTION NOTES, NOTE 1 THIS SHEET.

REMOVAL NOTES

1. THE CONTRACTOR SHALL SUBMIT, FOR DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02, A DETAILED OUTLINE OR PLAN OF THE PROPOSED METHOD FOR ITEM 502.10X PRIOR TO COMMENCEMENT OF ANY REMOVAL WORK.
2. REMOVAL OF EXISTING BRIDGE STRUCTURE, ITEM 502.10X, EXCEPT AS OTHERWISE SHOWN IN THE PLANS, SHALL INCLUDE:
 - A) REMOVAL OF EXISTING JOINT, TOP OF BACKWALL, AND END OF DECK AS REQUIRED.
 - B) REMOVAL OF EXISTING GRANITE CURB AS REQUIRED.
 - C) REMOVAL OF EXISTING EPOXY COATING.
3. EXISTING DECK PAVEMENT AND MEMBRANE SHALL BE REMOVED UNDER ITEM 511.00XX, CONCRETE BRIDGE DECK PAVEMENT REMOVAL (F).

ASBESTOS

1. ASBESTOS CONTAINING MATERIALS (ACM) EXIST BETWEEN THE BOTTOM OF THE DECK AND TOP OF BACKWALL AT ABUTMENT A (BR NO 097/089) AND AT ABUTMENT A AND B (BR NO 131/108). IT IS NOT ANTICIPATED THAT THIS MATERIAL WILL BE DISTURBED DURING THE EXECUTION OF THE WORK SHOWN ON THE PLANS. IF THE CONTRACTOR DETERMINES THAT FULL DEPTH DECK REPAIRS ARE REQUIRED IN THE VICINITY OF THE DECK OVER BACKWALL AT THE ABUTMENTS, WORK WILL STOP IN THIS AREA UNTIL AN ABATEMENT SUBCONTRACTOR CAN BE HIRED TO REMOVE THE ACM (PAID AS ITEM 1002.1, REPAIRS OR REPLACEMENTS AS NEEDED - BRIDGE STRUCTURES). OVERSIGHT OF THE REMOVAL, IF REQUIRED, SHALL BE PROVIDED BY NHDOT.

GENERAL CONSTRUCTION NOTES

1. EXISTING BRIDGE PLANS MAY BE VIEWED AT THE NHDOT, BUREAU OF BRIDGE DESIGN OFFICE, DURING THE BIDDING PERIOD. FILE NUMBERS FOR EACH BRIDGE ARE LISTED AS FOLLOWS:
BARNSTEAD BR NO 097/089 FILE 3-11-3-1
BARNSTEAD BR NO 131/108 FILE 3-5-3-1
2. PORTABLE CONCRETE BARRIER OR CHANNELIZING DEVICES SHALL BE IN PLACE BEFORE REMOVAL OPERATIONS BEGIN FOR EACH CONSTRUCTION PHASE. SEE BARRIER LAYOUT PLANS FOR LAYOUT OF PROPOSED PHASED CONSTRUCTION.
3. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO INSURE THAT DEBRIS DOES NOT FALL INTO THE ROADWAY OR WATERWAY BELOW EXISTING STRUCTURES. ALL COST TO BE PAID UNDER ITEM 502.10X AND SHALL INCLUDE THE ERECTION, MAINTENANCE, AND REMOVAL OF TEMPORARY STRUCTURES OR OTHER SUCH METHODS AS APPROVED.

4. NO SCAFFOLDS SHALL BE ERECTED OR OPERATIONS CONDUCTED IN THE ROADWAY RIGHT OF WAY, UNLESS APPROVED BY THE CONTRACT ADMINISTRATOR.
5. DURING ALL REMOVAL AND REPAIR OPERATIONS EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING DECK REINFORCEMENT. ANY DAMAGE SHALL BE IMMEDIATELY REPORTED TO THE BUREAU OF BRIDGE DESIGN AND REPAIRED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.
6. DURING END OF DECK CONCRETE REMOVAL OPERATIONS, EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE TOP FLANGES OF EXISTING GIRDERS. ANY DAMAGE SHALL BE IMMEDIATELY REPORTED TO THE BUREAU OF BRIDGE DESIGN AND REPAIRED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.
7. TO ACCOMPLISH THE PROPOSED EXPANSION JOINT REPAIRS, THE EXISTING DECK AND BACKWALL SHALL BE REMOVED TO LIMITS SHOWN IN THE PLANS UNDER ITEM 502.10X, REMOVAL OF EXISTING BRIDGE STRUCTURE. ALL EXPOSED CONCRETE SURFACES OF THE DECK AND BACKWALL SHALL BE SAWCUT 1" DEEP TO PROVIDE CLEAN REMOVAL LINES (ALL COSTS INCLUDED IN ITEM 502.10X, REMOVAL OF EXISTING BRIDGE STRUCTURE. PRIOR TO PLACING NEW CONCRETE, THE REMOVAL SURFACES SHALL BE BLAST CLEANED AND SATURATED SURFACE DRY (ALL COSTS INCLUDED IN ITEM 520.0201).
8. AFTER REMOVAL OF EXISTING PAVEMENT AND MEMBRANE, AS REQUIRED IN THE SCOPE OF WORK, THE EXISTING CONCRETE BRIDGE DECKS SHALL BE "SOUNDED" TO DETERMINE AREAS REQUIRING PARTIAL AND FULL DEPTH DECK REPAIRS. ALL COSTS TO BE INCLUDED IN ITEM 511.02 OR ITEM 511.03.
9. DETERIORATED AREAS OF DECK SHALL BE PATCHED WITH CONCRETE CLASS AA. PRIOR TO PLACING NEW CONCRETE, THE PREPARED AREAS SHALL BE BLAST CLEANED AND SATURATED SURFACE DRY (ALL COSTS SUBSIDIARY TO ITEM 520.01 OR 520.0201).
10. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4", UNLESS OTHERWISE NOTED.
11. ITEM 538.5, BARRIER MEMBRANE, HEAT WELDED (F) SHALL BE OVERLAPPED PER MANUFACTURER'S REQUIREMENTS AT PHASED CONSTRUCTION JOINTS. AT DECK ENDS, WHERE THE MEMBRANE WILL NOT OVERLAP NEW OR EXISTING MEMBRANE, A SEALANT/REPAIR MASTIC COMPATIBLE WITH ITEM 538.5 SHALL BRIDGE ANY GAP BETWEEN THE EXISTING MEMBRANE AND NEW MEMBRANE OR BETWEEN THE NEW MEMBRANE AND THE END DECK WHEN THERE IS NO EXISTING MEMBRANE. ALL COSTS SHALL BE SUBSIDIARY TO ITEM 538.5.
12. PROFILE ADJUSTMENTS IN THE VICINITY OF THE REHABILITATED BRIDGES SHALL BE MADE AS REQUIRED OR AS DIRECTED TO ACCOUNT FOR VARIATIONS IN THE BRIDGE DECK CROSS SLOPES. ALL COSTS SHALL BE SUBSIDIARY TO THE APPROPRIATE ITEMS.
13. REMOVE ANY EXISTING LOOSE OR FLAKING EPOXY COATING FROM THE BACKWALL AND SEATS AS DIRECTED. COSTS PAID UNDER ITEM 502.10X.
14. EXISTING BRIDGE DECK COPINGS, WINGS, BACKWALLS, BRIDGE SEATS, AND ABUTMENT FACES SHALL BE WASHED, SUBSIDIARY TO ITEM 534.3, IN SUCH A MANNER THAT OVERSPRAY INTO SURFACE WATERS IS KEPT TO A MINIMUM. IF THE WATER BEADS, NO COATING NEEDS TO BE APPLIED. IF THE WATER DOES NOT BEAD, COAT THE SURFACE WITH ITEM 534.3, WATER REPELLENT (SILANE-SILOXANE). APPLICATION RATE = 150 SF/GAL.
15. EXCEPT AS SHOWN IN PLANS, WHERE THE EXISTING GRANITE CURB HAS SEPARATED OR BEEN DISPLACED FROM THE CONCRETE BRUSH CURB, THE GRANITE CURB SHALL BE REMOVED AND RESET AS DIRECTED BY THE ENGINEER. ALL COSTS INCLUDED IN ITEM 609.55, RESET GRANITE CURB (BRIDGE).
16. PROVIDE ITEMS 403.6 AND 403.61, AS REQUIRED, ALONG LONGITUDINAL JOINTS BETWEEN PAVEMENT PASSES FOR EACH PAVEMENT COURSE, ALONG BRIDGE CURBS, AND ALONG EXPANSION JOINT ARMORING.
17. APPLY ITEM 410.22, ASPHALT EMULSION FOR TACK COAT, TO BOTH EXISTING AND PROPOSED BRIDGE AND ROADWAY PAVEMENT COURSES PRIOR TO PLACING THE NEXT COURSE.
18. ITEM 403.12, HOT BITUMINOUS PAVEMENT, HAND METHOD, SHALL BE PLACED TO FINISHED GRADE AS REQUIRED FOR PHASING IN PLACE OF TEMPORARY PAVEMENT ON BRIDGES WHERE HAND METHOD IS REQUIRED.
19. ITEM 563.8, RESETTING BRIDGE RAIL, SHALL BE PAID AS 1 LF/POST.
20. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL MAKE A RECORD OF THE EXISTING PAINT PAVEMENT MARKINGS. UPON COMPLETION OF THE BRIDGE WORK, THE PAVEMENT MARKINGS SHALL BE REPLACED IN KIND WITH ITEM 632.0104, RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE.

REINFORCING NOTES

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET - STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A615), GRADE 60.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS AND OTHER STANDARD PRATICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. EXISTING REINFORCING STEEL THAT IS TO REMAIN IN PLACE WITHIN THE RECONSTRUCTED AREAS SHALL BE CUT AS REQUIRED TO PROVIDE 2 1/2" MINIMUM CLEAR COVER FROM THE PROPOSED CONCRETE SURFACES, EXCEPT AS OTHERWISE NOTED. ALL COSTS INCLUDED IN ITEM 502.10X. ALL NEW REINFORCING BARS SHALL HAVE A MINIMUM CLEAR COVER OF 2 1/2" FROM PROPOSED CONCRETE SURFACES UNLESS OTHERWISE NOTED.
4. UNLESS OTHERWISE NOTED, HOLES DRILLED INTO EXISTING CONCRETE SHALL BE DRILLED 1/2" DIAMETER LARGER THAN THE BAR DIAMETER AND GROUTED WITH HIGH STRENGTH, NON-SHRINK CEMENTITIOUS GROUT. ALL COSTS FOR DRILLING AND GROUTING SHALL BE PAID FOR UNDER ITEM 520.0201.
5. ANY EXISTING REBAR THAT IS EXPOSED SHALL BE CLEANED OF ALL FOREIGN MATERIAL, SUBSIDIARY TO ITEM 511.
6. REINFORCING LEGEND: SP = SPACE, SPL = SPLICE, FS = FAR SIDE, NS = NEAR SIDE, BOT = BOTTOM, ALT = ALTERNATING.
7. PLACE REINFORCING STEEL TO AVOID RAIL POST ANCHOR ASSEMBLIES, ANCHOR BOLTS, AND EXPANSION JOINT ASSEMBLIES.
8. REINFORCING BAR MARKS APPENDED WITH AN (E), INDICATE EPOXY COATED BARS.

SUMMARY OF BRIDGE QUANTITIES					
ITEM NO.	ITEM DESCRIPTION	BARNSTEAD BR NO 097/089 NH ROUTE 28 over BEAUTY HILL RD	BARNSTEAD BR NO 131/108 NH ROUTE 28 over SUNCOOK RIVER	QUANTITY	UNIT
		7	19		
304.301	CRUSHED GRAVEL		26		CY
403.11	HOT BITUMINOUS PAVEMENT, MACHINE METHOD	791.0	750.0	1541.0	TON
403.12	HOT BITUMINOUS PAVEMENT, HAND METHOD	3.4	6.4	9.8	TON
403.6	PAVEMENT JOINT ADHESIVE	6980	5240	12220	LF
403.61	PAVEMENT JOINT ADHESIVE (BRIDGE BASE)	375	320	695	LF
403.911	HOT BITUMINOUS BRIDGE PAVEMENT, 1" BASE COURSE	17.6	16.3	33.9	TON
403.99	TEMPORARY BITUMINOUS PAVEMENT	14.9	14.0	28.9	TON
410.22	ASPHALT EMULSION FOR TACK COAT	480	456	936	GAL
417.	COLD PLANING BITUMINOUS SURFACES	3887	3691	7578	SY
417.412	RUMBLE STRIPS, 12" WIDE	781	786	1567	LF
417.53	REMOVE AND INLAY EXISTING RUMBLE STRIPS	781	786	1567	LF
502.101	REMOVAL OF EXISTING BRIDGE STRUCTURE	1	-	1	U
504.1	COMMON BRIDGE EXCAVATION (F)	20	22	42	CY
511.0001	CONCRETE BRIDGE DECK PAVEMENT REMOVAL (F)	314	-	314	SY
511.0002	CONCRETE BRIDGE DECK PAVEMENT REMOVAL (F)	-	285	285	SY
511.02	PREPARATION FOR PARTIAL DEPTH CONCRETE BRIDGE DECK REPAIRS	7	25	32	SY
511.03	PREPARATION FOR FULL DEPTH CONCRETE BRIDGE DECK REPAIRS	2	60	62	SY
512.02	PREPARATION FOR CONCRETE REPAIRS, CLASS II	5	5	10	SY
520.01	CONCRETE CLASS AA	1	3	4	CY
520.0201	CONCRETE CLASS AA, ABOVE FOOTINGS	17	12	29	CY
521.22	FAST-SET, NON-SHRINK PATCHING MORTAR (VERTICAL AND OVERHEAD)	-	1	1	CF
534.3	WATER REPELLENT (SILANE-SILOXANE)	11	7	18	GAL
538.2	BARRIER MEMBRANE, PEEL AND STICK - VERTICAL SURFACES (F)	17	20	37	SY
538.5	BARRIER MEMBRANE, HEAT WELDED (F)	309	294	603	SY
541.5	PVC WATERSTOPS, NH TYPE 5 (F)	53	-	53	LF
544.	REINFORCING STEEL (F)	2116	-	2116	LB
544.11	REINFORCING STEEL, MECHANICAL CONNECTORS (F)	271	-	271	LB
559.41	ASPHALTIC PLUG FOR CRACK CONTROL (F)	49	80	129	LF
560.1001	PREFABRICATED COMPRESSION SEAL EXPANSION JOINT (F)	54	-	54	LF
562.1	SILICONE JOINT SEALANT (F)	7	-	7	LF
563.8	RESETTING BRIDGE RAIL	2	-	2	LF
563.95	SNOW SCREENING FOR OVERPASS STRUCTURES	55	-	55	LF
604.0007	POLYETHYLENE LINER	2	3	5	EA
604.4	RECONSTRUCTING/ADJUSTING CATCH BASIN & DROP INLET	2	3	5	LF
604.72	GRATES AND FRAMES, TYPE B	1	-	1	EA
606.417	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL	340	280	620	LF
606.41741	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE)	400	360	760	LF
606.9523	TEMP. IMPACT ATTENUATION DEVICE (NON-REDIRECTIVE), TEST LEVEL 3	2	2	4	U
609.5	RESET GRANITE CURB	16	-	16	LF
609.55	RESET GRANITE CURB (BRIDGE)	8	-	8	LF
618.61	UNIFORMED OFFICERS WITH VEHICLE	*	*	*	\$
618.7	FLAGGERS	3000	3000	6000	HR
619.1	MAINTENANCE OF TRAFFIC	0.5	0.5	1	U
619.25	PORTABLE CHANGEABLE MESSAGE SIGN	2	2	4	U
619.27	TRAILER-MOUNTED SPEED LIMIT SIGN	2	2	4	U
628.2	SAWED BITUMINOUS PAVEMENT	92	87	179	LF
628.22	SAWED BITUMINOUS PAVEMENT (BRIDGE)	50	80	130	LF
632.0104	RETROREFLECTIVE PAINT PAVE, MARKING, 4" LINE	14000	12000	26000	LF
632.911	OBLITERATE PAVE. MARKING LINE, 12" WIDE & UNDER	6600	6400	13000	LF
670.104	TEMPORARY PORTABLE LIGHTING	2	2	4	U
692.	MOBILIZATION	0.5	0.5	1	U
698.13	FIELD OFFICE TYPE C	5	5	10	MDN
699.	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	*	*	*	\$
1002.1	REPAIRS OR REPLACEMENTS AS NEEDED - BRIDGE STRUCTURES	*	*	*	\$
1010.15	FUEL ADJUSTMENT	*	*	*	\$

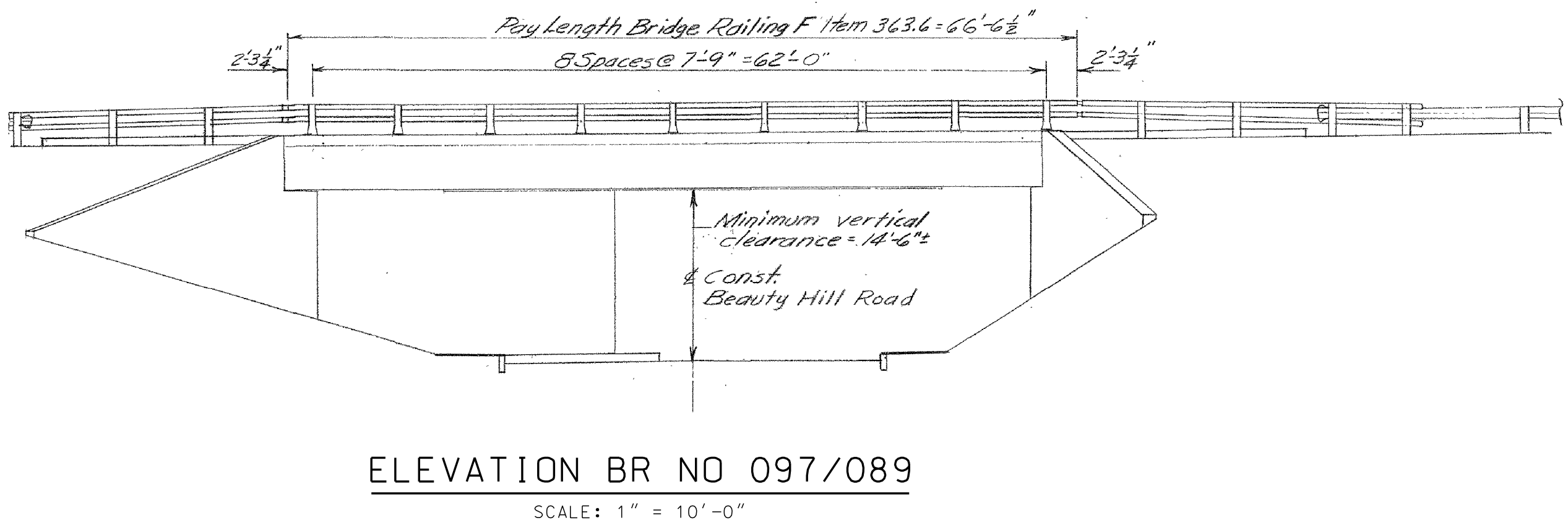
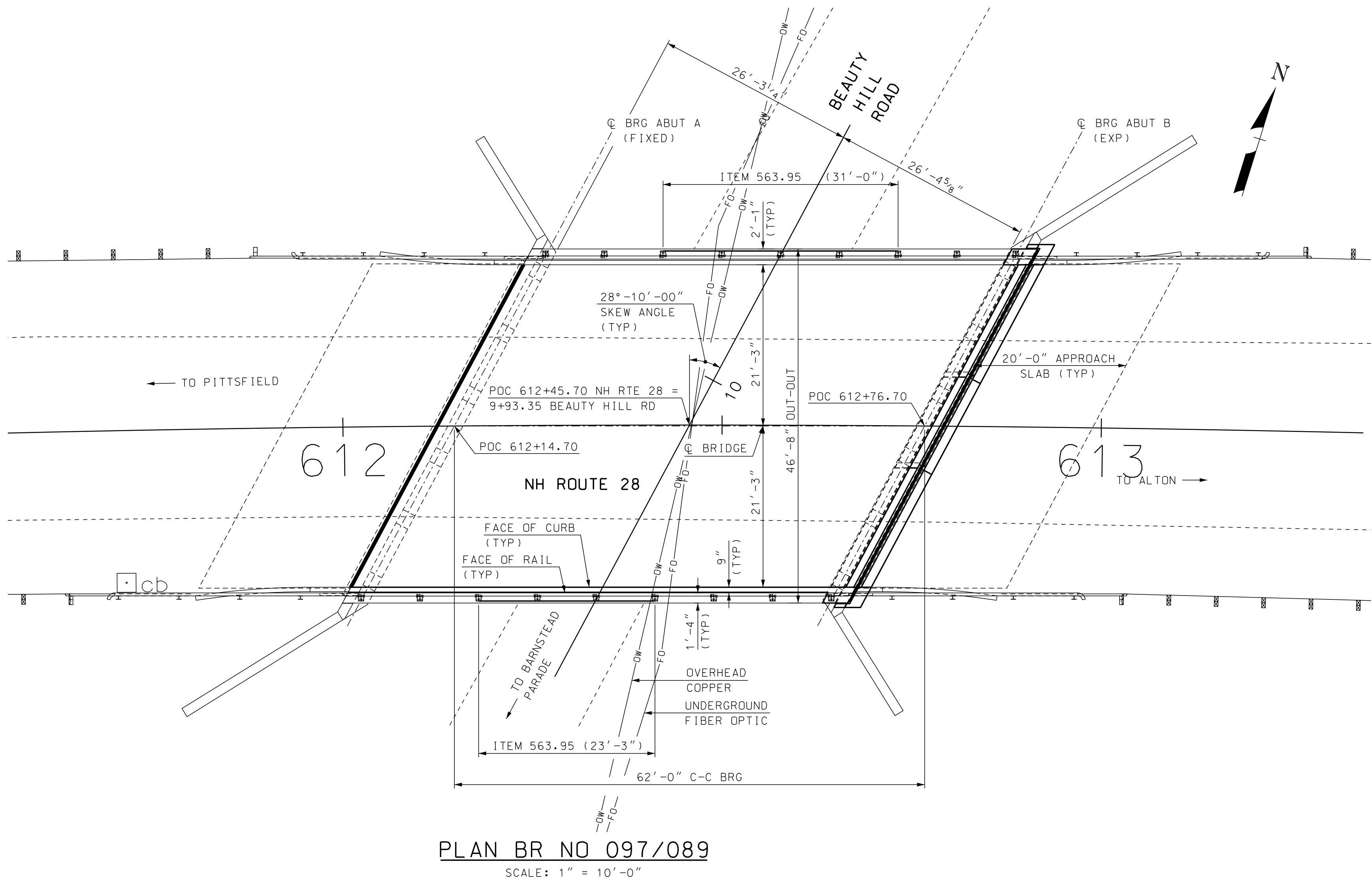
* NOT A BID ITEM

DRAINAGE NOTES

1. ITEM 604.007, POLYETHYLENE LINER AND ITEM 604.4, RECONSTRUCTING/ADJUSTING CATCH BASIN & DROP INLET ARE TO BE USED AT THE FOLLOWING LOCATIONS:
STA 610+00 ±, RT 21' ±
STA 611+71 ±, RT 21' ±
STA 208+75 ±, LT 18' ±
STA 209+92 ±, LT 18' ±
STA 209+92 ±, RT 18' ±
2. ITEM 604.72, GRATES AND FRAMES, TYPE B TO BE USED AT THE FOLLOWING LOCATION:
STA 610+00 ±, RT 21' ±

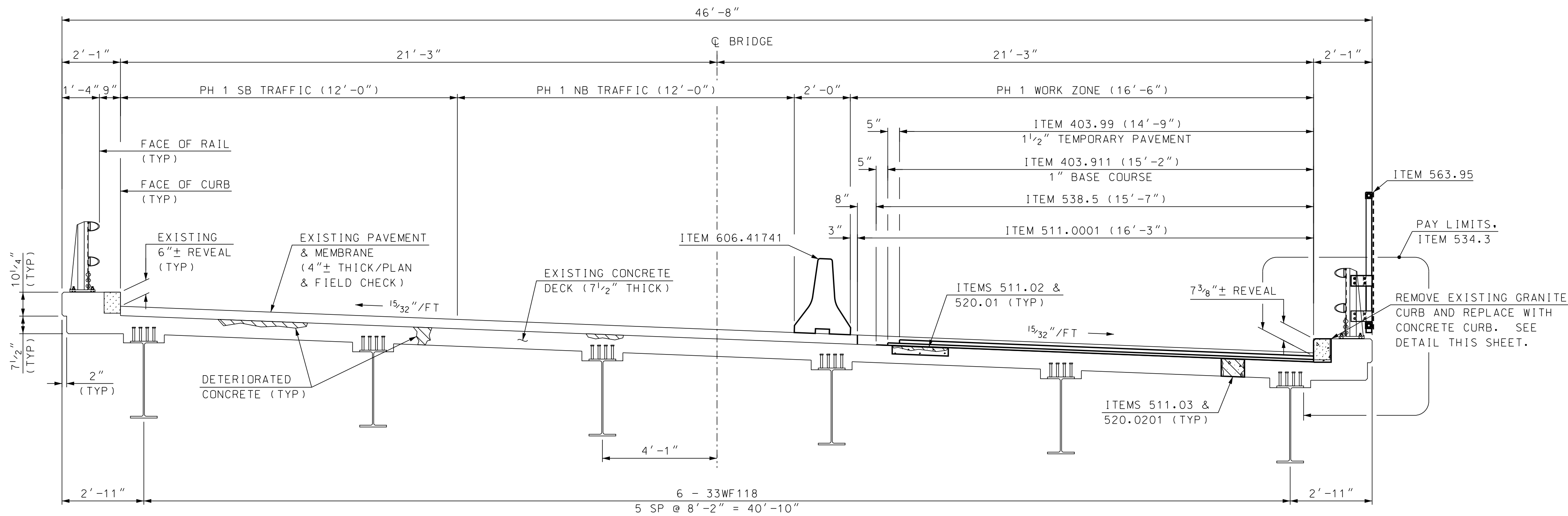
STATE OF NEW HAMPSHIRE											
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN											
TOWN	BARNSTEAD		BRIDGE NO. 097/089, 131/108				STATE PROJECT		41301		
LOCATION			NH ROUTE 28 over BEAUTY HILL RD & SUNCOOK RIVER								
NOTES AND QUANTITIES								BRIDGE SHEET			
REVISIONS AFTER PROPOSAL					BY		DATE	BY		DATE	1 OF 14
					DESIGNED	SMG	9/17	CHECKED	JAT	7/18	FILE NUMBER 134-4-1
					DRAWN	SMG	9/17	CHECKED	JAT	7/18	
					QUANTITIES	SMG	7/18	CHECKED	JAT	7/18	
					ISSUE DATE		FEDERAL PROJECT NO.			SHEET NO.	TOTAL SHEETS
					REV. DATE		-----			5	23

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC\	41301 Notes	AS NOTED



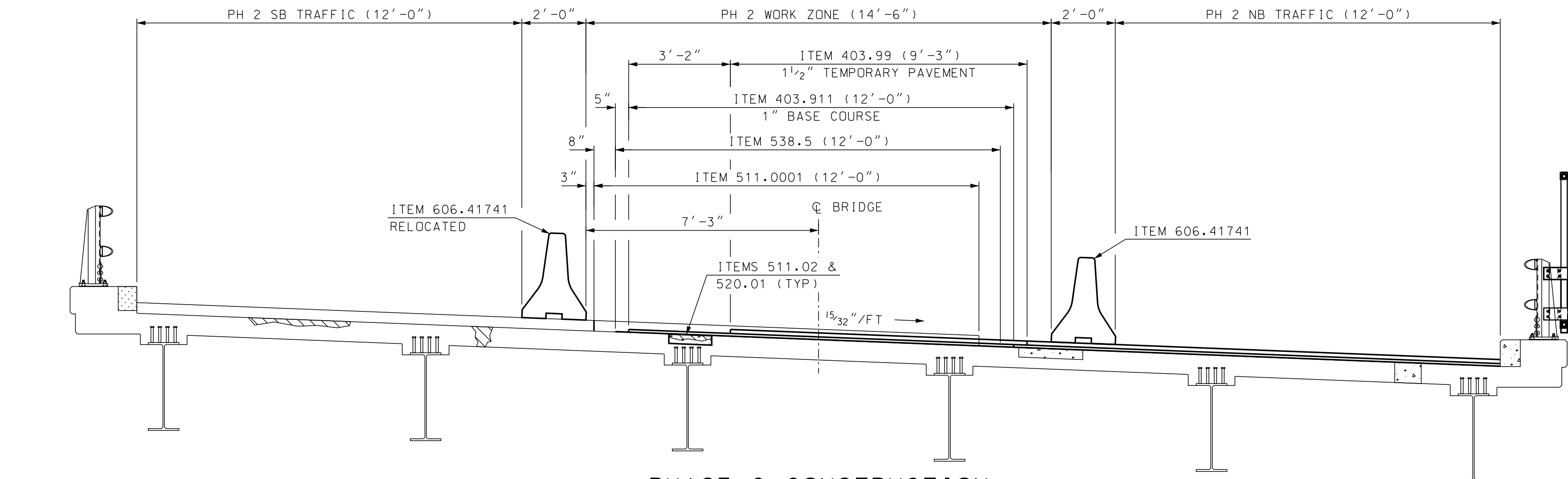
STATE OF NEW HAMPSHIRE											
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN											
TOWN		BARNSTEAD		BRIDGE NO.		097/089		STATE PROJECT		41301	
LOCATION										NH ROUTE 28 over BEAUTY HILL RD	
GENERAL PLAN AND ELEVATION BR NO 097/089										BRIDGE SHEET	
REVISIONS AFTER PROPOSAL						BY		DATE		2 OF 14	
						DESIGNED		SMG		9/17	
						CHECKED		JAT		7/18	
						DRAWN		SMG		9/17	
						CHECKED		JAT		7/18	
						QUANTITIES		SMG		7/18	
						CHECKED		JAT		7/18	
						ISSUE DATE				FEDERAL PROJECT NO.	
						REV. DATE				SHEET NO.	
						-----				6	
										TOTAL SHEETS	
										23	

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
097-089 Beauty Hill Rd	097-089 Genplan	AS NOTED



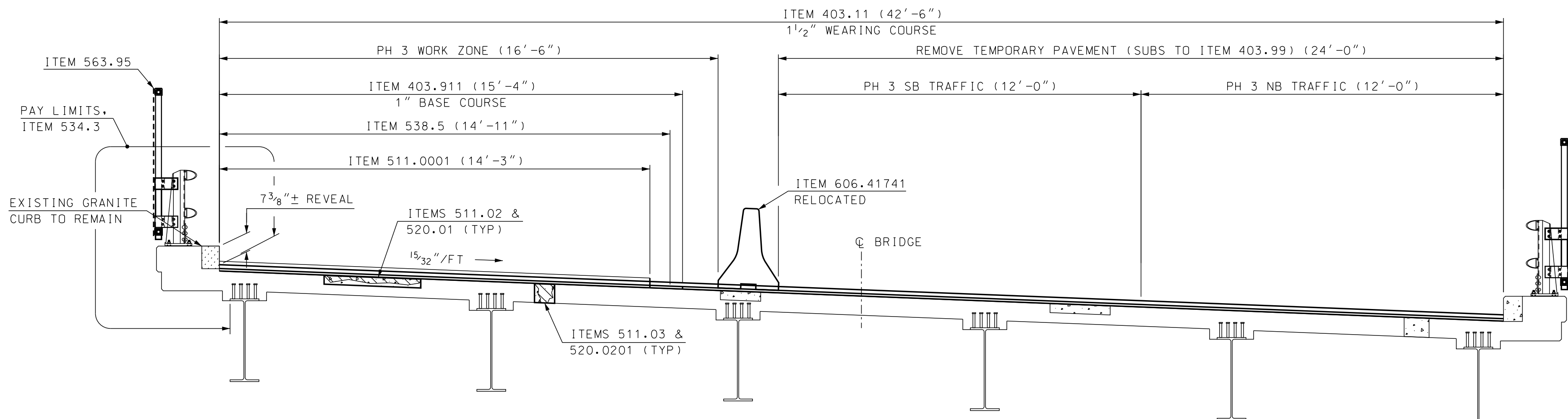
PHASE 1 CONSTRUCTION

SCALE: 3/8" = 1'-0"



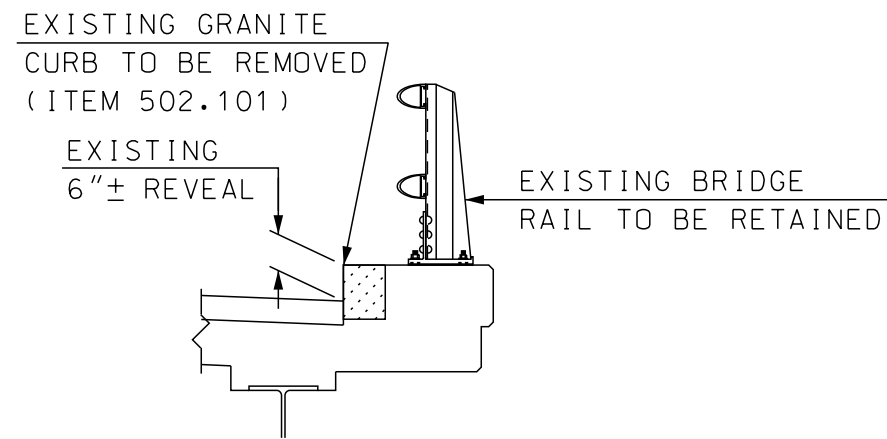
PHASE 2 CONSTRUCTION

SCALE: 3/8" = 1'-0"



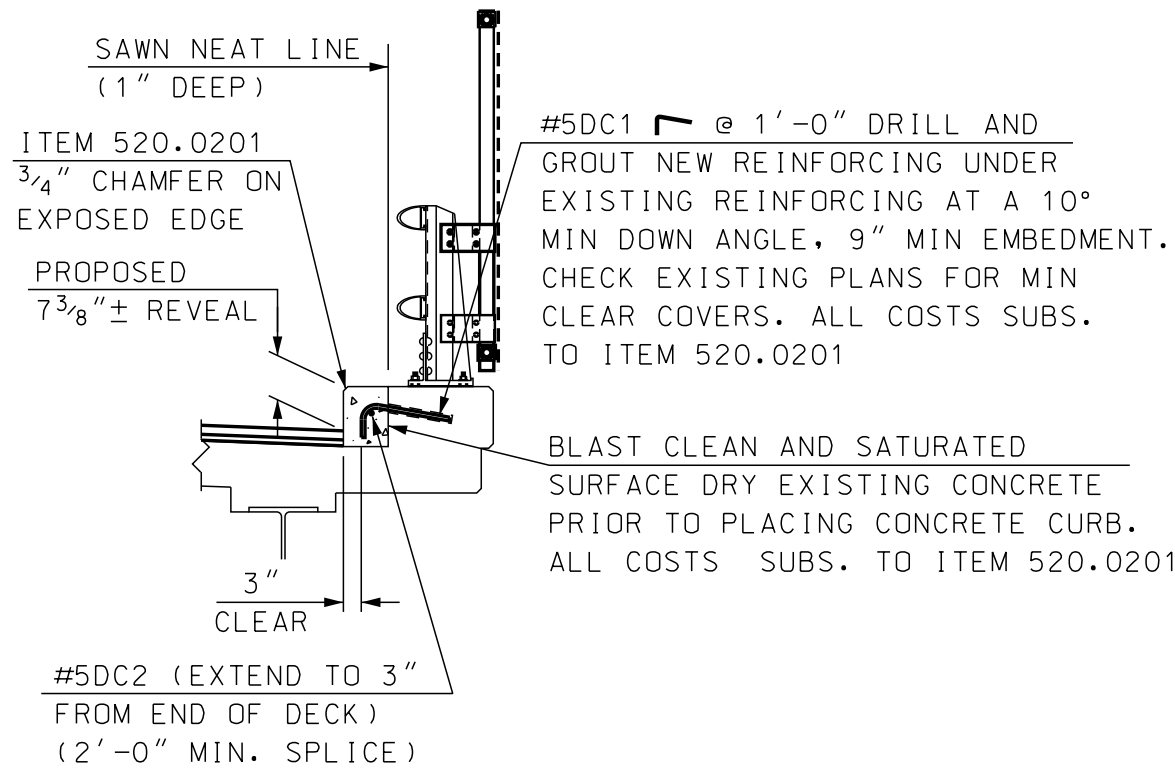
PHASE 3 CONSTRUCTION

SCALE: 3/8" = 1'-0"



EXISTING GRANITE CURB

GENERIC DETAIL NOT TO SCALE

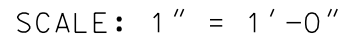


PROPOSED CONCRETE CURB

SCALE: 3/8" = 1'-0"

SEE BRIDGE SHEET 6 FOR REINFORCING SCHEDULE AND DETAIL FOR #5DC1 & #5DC2

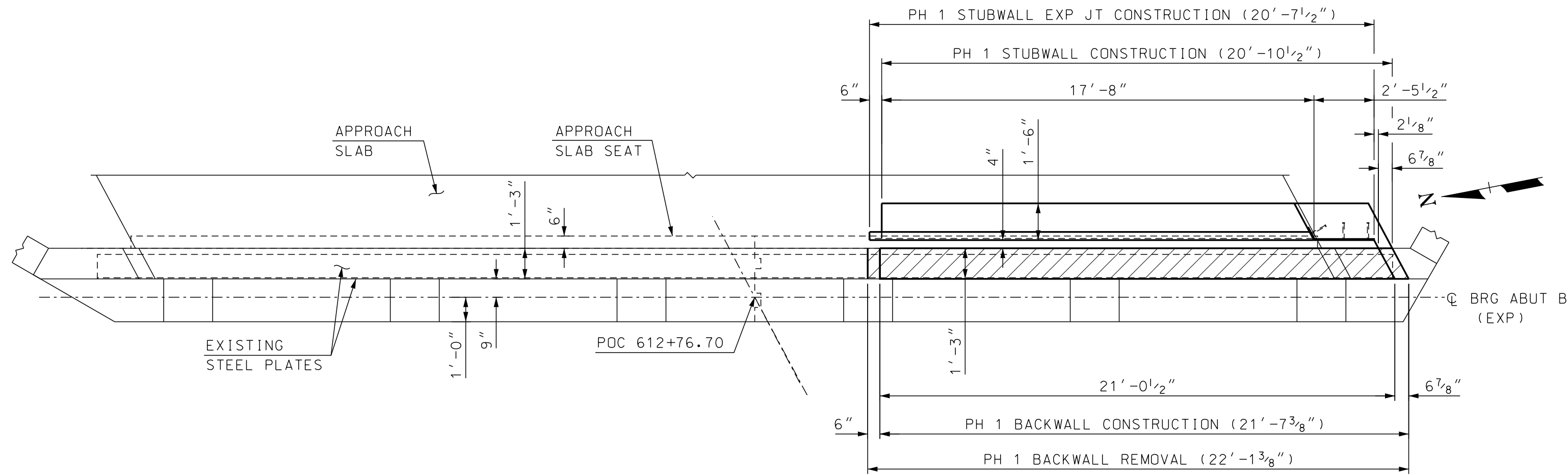
STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BARNSTEAD			BRIDGE NO.	097/089		STATE PROJECT	41301	
LOCATION	NH ROUTE 28 over BEAUTY HILL RD								
PHASING BR NO 097/089								BRIDGE SHEET	
REVISIONS AFTER PROPOSAL				BY	DATE	BY	DATE	3 OF 14	
				DESIGNED	SMG	9/17	CHECKED	JAT	7/18
				DRAWN	SMG	9/17	CHECKED	JAT	7/18
				QUANTITIES	SMG	7/18	CHECKED	JAT	7/18
				ISSUE DATE			FEDERAL PROJECT NO.	SHEET NO.	
				REV. DATE			-----	7	23



SCALE: $1\frac{1}{2}'' = 1' - 0''$

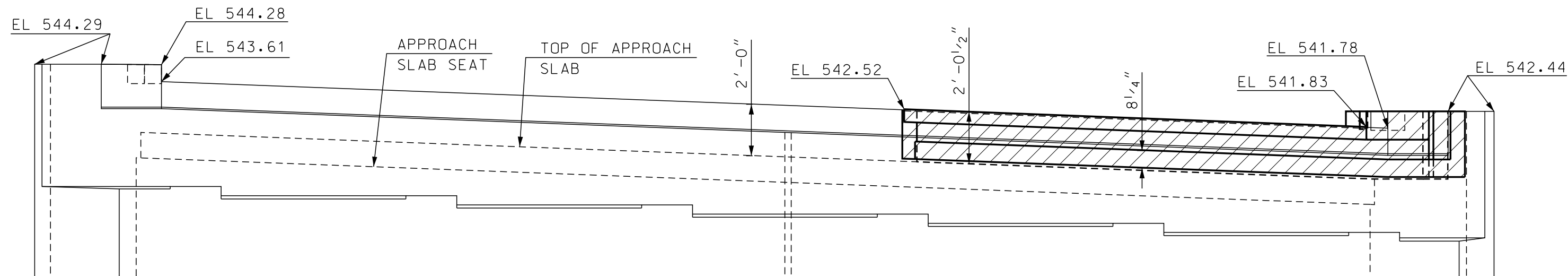


SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
097-089 Beauty Hill Rd	097-089 Details	AS NOTED



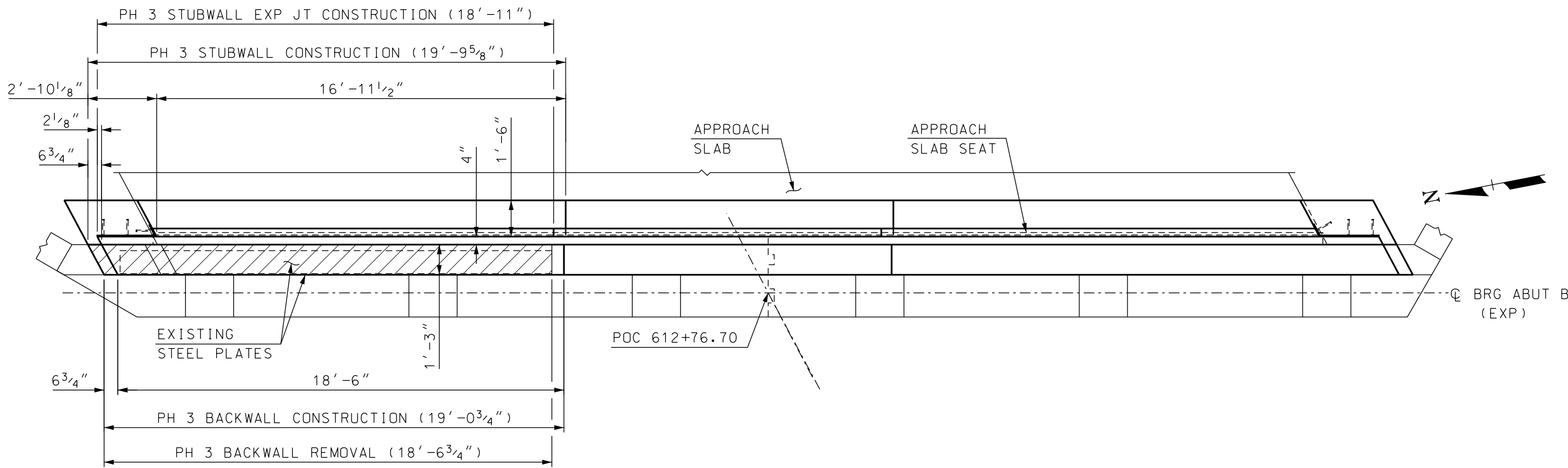
PHASE 1 PLAN

SCALE: 1/4" = 1'-0"



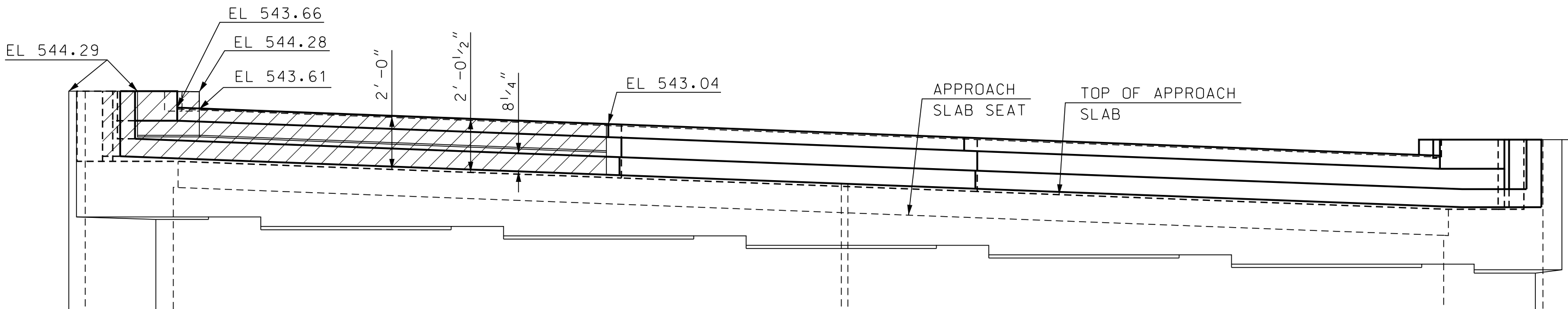
PHASE 1 ELEVATION

SCALE: 1/4" = 1'-0"



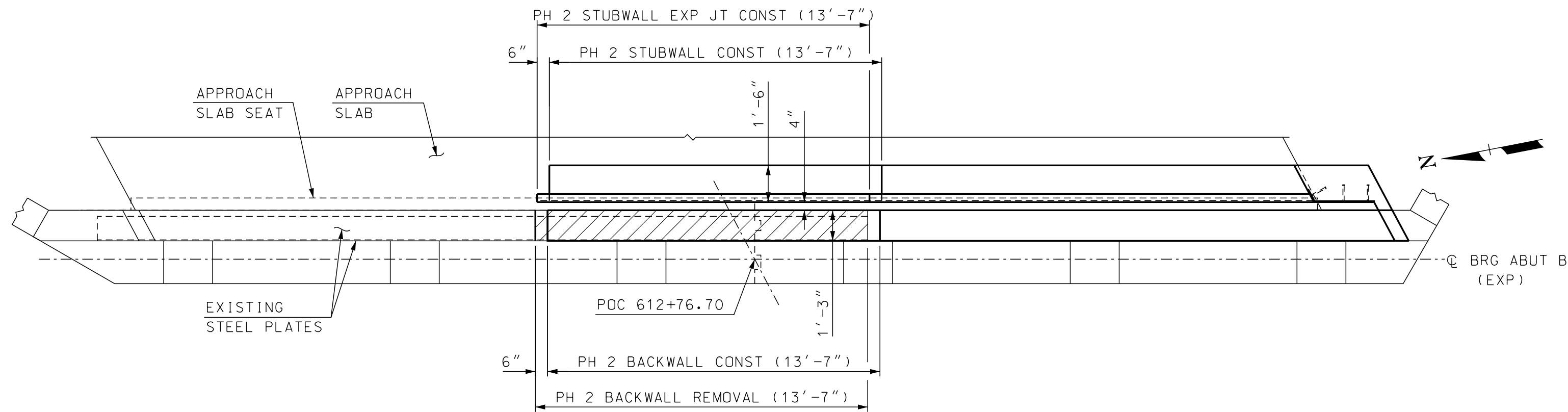
PHASE 3 PLAN

SCALE: 1/4" = 1'-0"



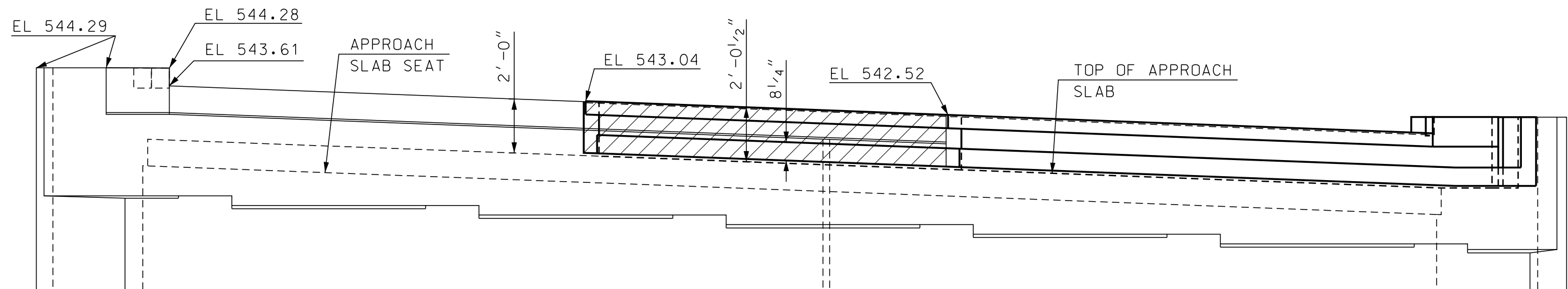
PHASE 3 ELEVATION

SCALE: 1/4" = 1'-0"



PHASE 2 PLAN

SCALE: 1/4" = 1'-0"



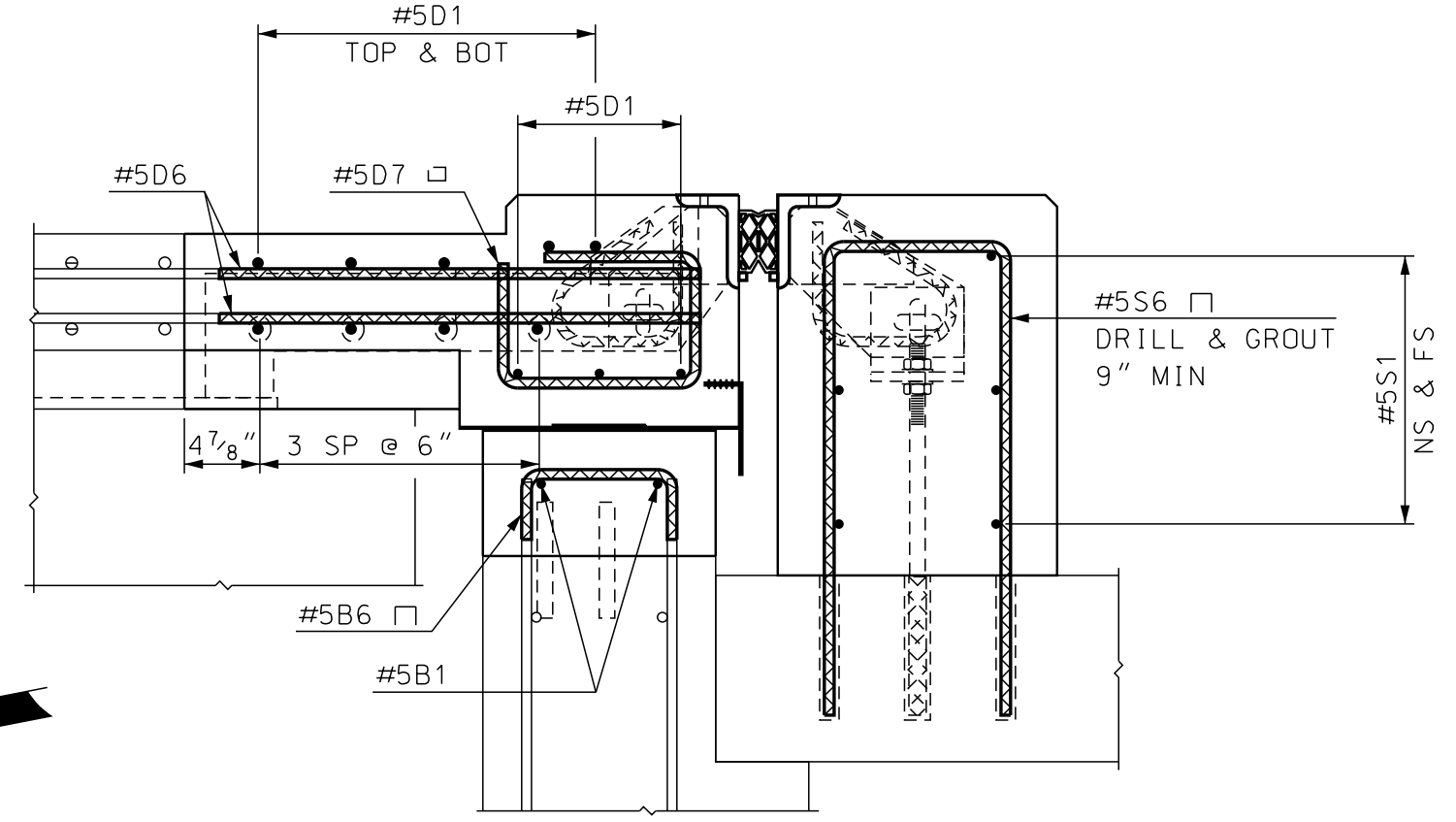
PHASE 2 ELEVATION

SCALE: 1/4" = 1'-0"

SEE SECTION A-A REMOVAL AND SECTION A-A CONSTRUCTION ON
BRIDGE SHEET 8 FOR ADDITIONAL DETAILS.

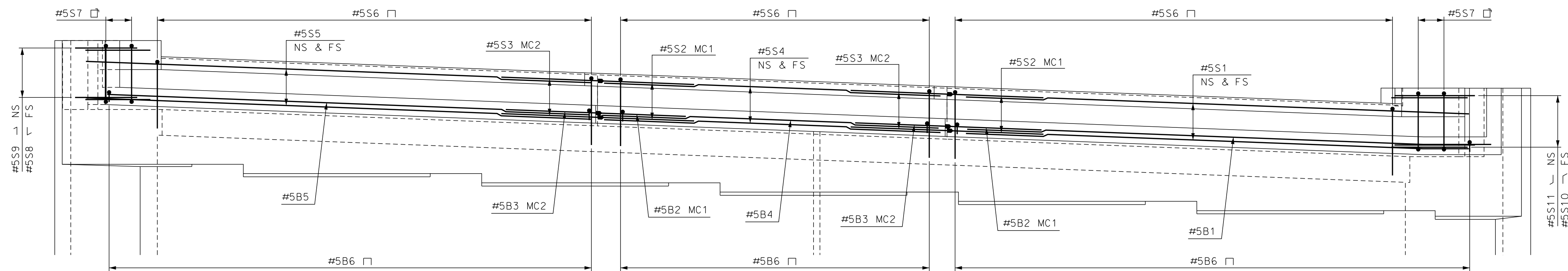
STATE OF NEW HAMPSHIRE											
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN											
TOWN		BARNSTEAD		BRIDGE NO.		097/089		STATE PROJECT		41301	
LOCATION		NH ROUTE 28 over BEAUTY HILL RD									
ABUTMENT B BR NO 097/089										BRIDGE SHEET	
REVISIONS AFTER PROPOSAL				BY		DATE		BY		DATE	
				DESIGNED	SMG	9/17	CHECKED	JAT	7/18	5 OF 14	
				DRAWN	SMG	9/17	CHECKED	JAT	7/18	FILE NUMBER	
				QUANTITIES	SMG	7/18	CHECKED	JAT	7/18	134-4-1	
				ISSUE DATE		FEDERAL PROJECT NO.			SHEET NO.		TOTAL SHEETS
				REV. DATE		-----			9		23

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
097-089 Beauty Hill Rd	097-089 Abut B	AS NOTED

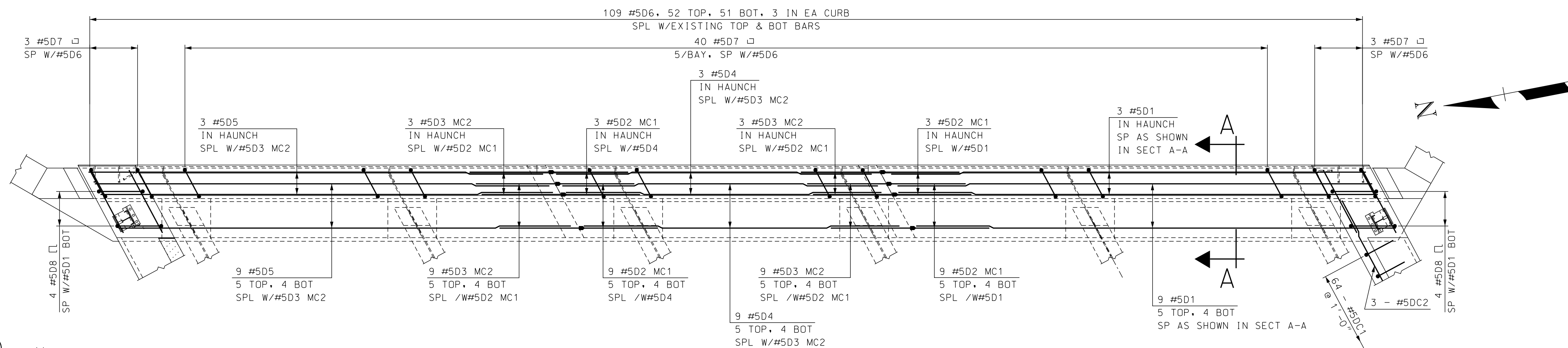


SECTION A-A

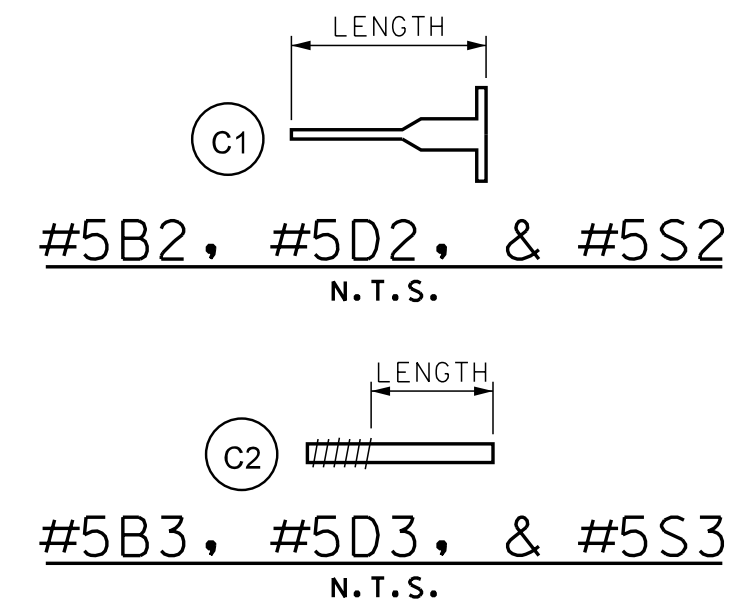
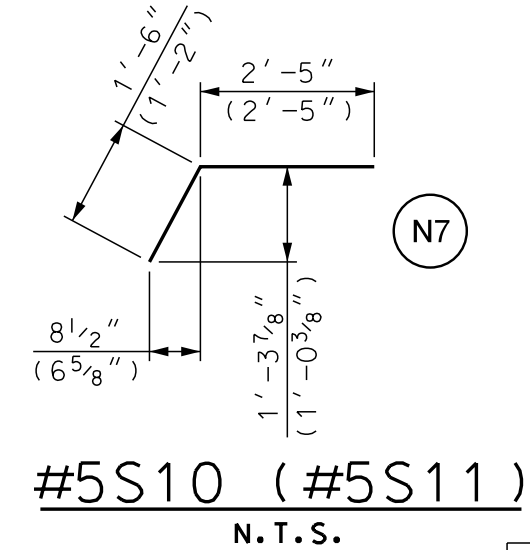
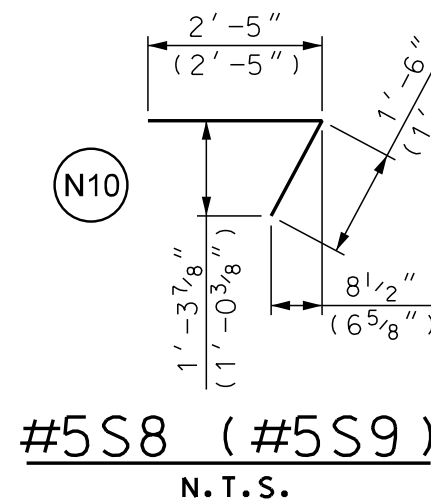
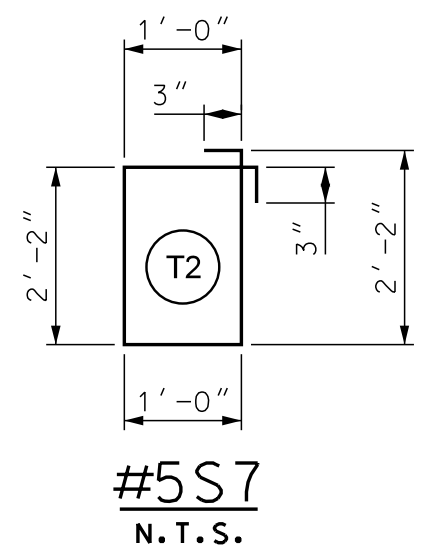
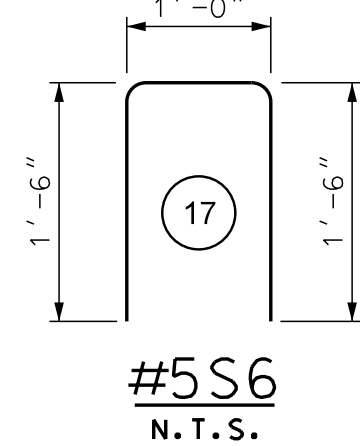
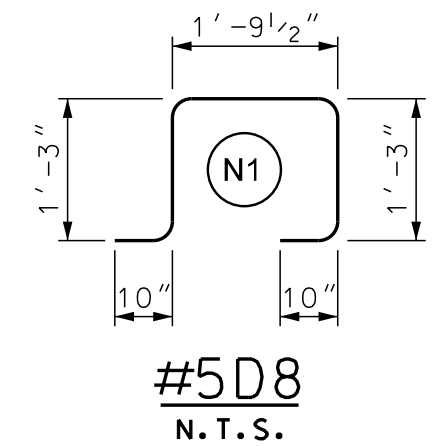
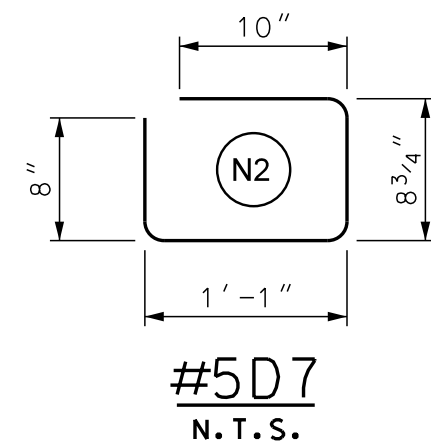
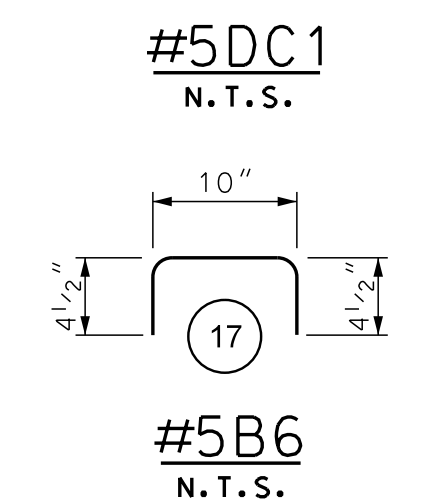
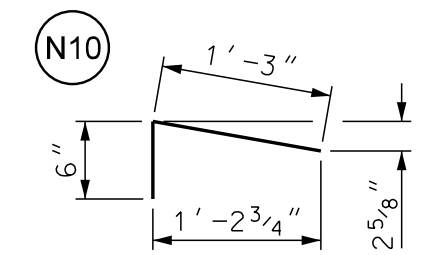
SCALE: $\frac{3}{8}'' = 1' - 0''$



SCALE: $\frac{3}{8}'' = 1' - 0''$



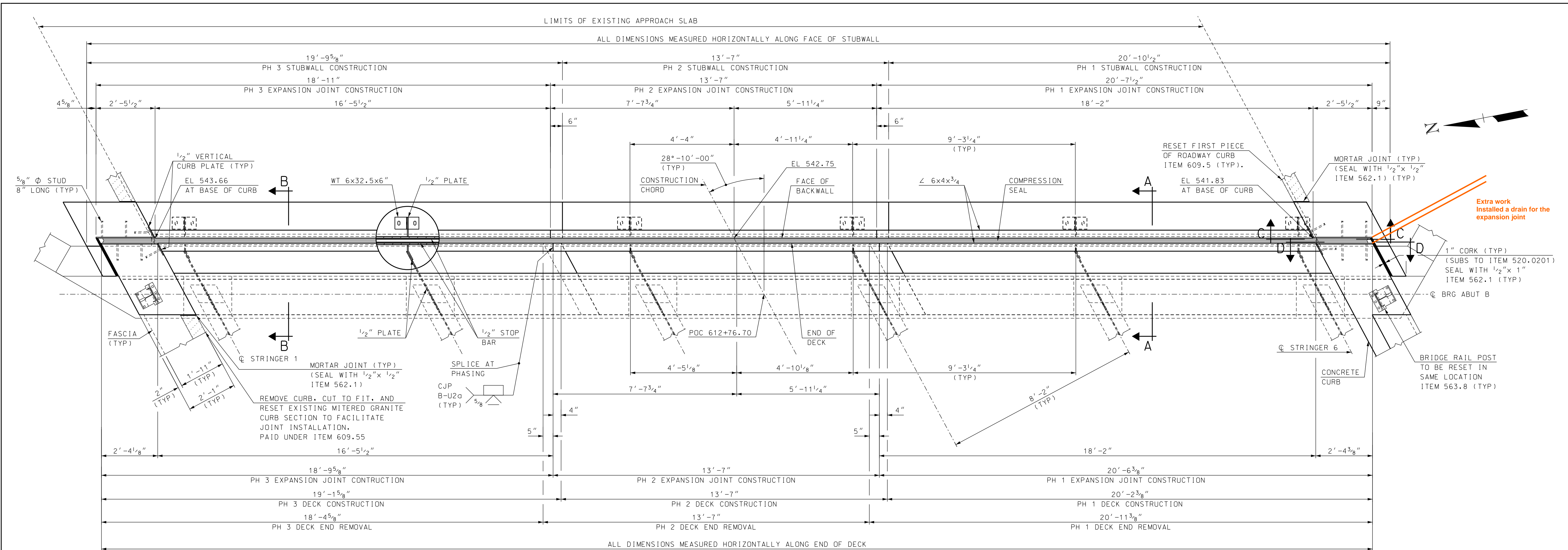
SCALE: $\frac{3}{8}'' = 1' - 0''$



BR. NO. 097/089					
MARK	SIZE	LENGTH	TYPE	# PIECES	LBS
B1	#5	20' - 4"	---	2	42.4
B2	#5	3' - 6"	C1	4	14.6
B3	#5	3' - 6"	C2	4	14.6
B4	#5	13' - 1"	---	2	27.3
B5	#5	18' - 9"	---	2	39.1
B6	#5	1' - 7"	17	54	89.2
D1	#5	19' - 5"	---	12	243.0
D2	#5	3' - 3"	C1	24	81.4
D3	#5	3' - 3"	C2	24	81.4
D4	#5	12' - 11"	---	12	161.7
D5	#5	18' - 6"	---	12	231.6
D6	#5	2' - 11"	---	109	331.6
D7	#5	3' - 3 ³ / ₄ "	N2	46	158.9
D8	#5	5' - 11 ¹ / ₂ "	N1	8	49.7
DC1	#5	1' - 9"	N10	64	116.8
DC2	#5	23' - 0"	---	3	72.0
S1	#5	19' - 6"	---	5	101.7
S2	#5	3' - 9"	C1	10	39.1
S3	#5	3' - 9"	C2	10	39.1
S4	#5	13' - 1"	---	5	68.2
S5	#5	19' - 7"	---	5	102.1
S6	#5	4' - 0"	17	49	204.4
S7	#5	6' - 10"	T2	4	28.5
S8	#5	3' - 11"	N10	3	12.3
S9	#5	3' - 7"	N10	3	11.2
S10	#5	3' - 11"	N7	3	12.3
S11	#5	3' - 7"	N7	3	11.2
ITEM	DESCRIPTION				TOTAL
544.	REINFORCING STEEL				2116
544.11	MECHANICAL CONNECTORS				271

SEE SECTION A-A REMOVAL AND SECTION A-A CONSTRUCTION ON
BRIDGE SHEET 8 FOR ADDITIONAL DETAILS AND REINFORCING NOTES
ON BRIDGE SHEET 1.

STATE OF NEW HAMPSHIRE										
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN										
TOWN		BARNSTEAD		BRIDGE NO.		097/089		STATE PROJECT		41301
LOCATION		NH ROUTE 28 over BEAUTY HILL RD								
ABUTMENT B BR NO 097/089									BRIDGE SHEET	
REVISIONS AFTER PROPOSAL			BY		DATE		BY		DATE	
			DESIGNED	SMG	9/17	CHECKED	JAT	7/18	6 OF 14	
			DRAWN	SMG	9/17	CHECKED	JAT	7/18	FILE NUMBER	
			QUANTITIES	SMG	7/18	CHECKED	JAT	7/18	134-41	
			ISSUE DATE				FEDERAL PROJECT NO.		SHEET NO.	
			REV. DATE				-----		10	
									TOTAL SHEETS	
									23	



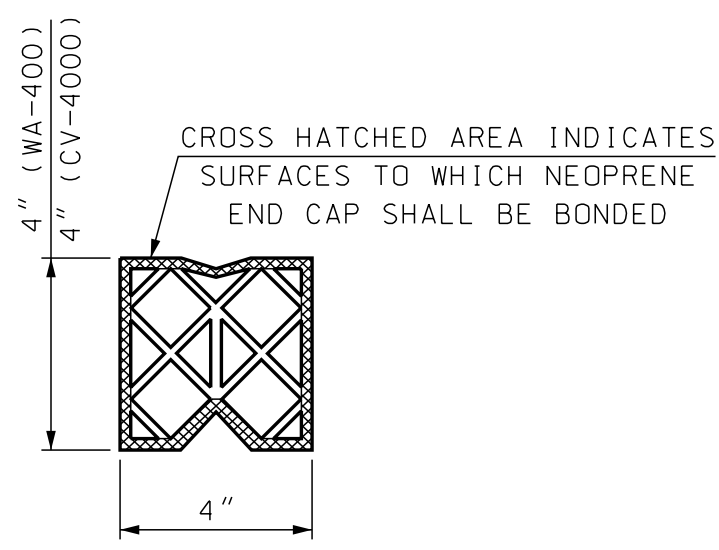
PLAN BR NO 097/089

SCALE: 1/2" = 1'-0"

EXPANSION JOINT NOTES

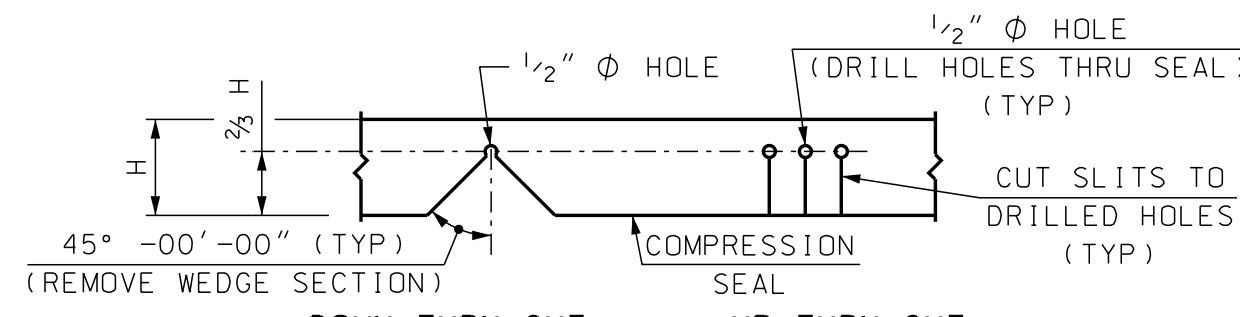
- (1) ALL EXPANSION JOINT STEEL, INCLUDING ANCHORS, SHALL BE GALVANIZED. STEEL ANGLES SHALL BE ASTM A572 GRADE 50. MINOR STEEL PLATES MAY CONFORM TO ASTM A36. THE ENTIRE ASSEMBLY, INCLUDING COMPRESSION SEAL, SHALL BE PAID FOR AS ITEM 560.1001, PREFABRICATED COMPRESSION SEAL EXPANSION JOINT (F).
- (2) SPLICES FOR STEEL ANGLES SHALL DEVELOP FULL STRENGTH.
- (3) THE EXPANSION JOINT OPENING SHALL BE PRESET TO TEMPERATURE ANTICIPATED PRIOR TO POURING DECK BLOCKOUT. FINAL SETTING IN THE FIELD SHALL BE DETERMINED BY THE CONTRACT ADMINISTRATOR. SEE TEMPERATURE ADJUSTMENT TABLE & NOTES ON BRIDGE SHEET 8.
- (4) THE COMPRESSION SEAL SHALL BE FURNISHED IN ONE CONTINUOUS LENGTH. NO SPLICES WILL BE ALLOWED. SEAL SHALL BE INSTALLED IN THE FIELD BY THE CONTRACTOR, IN ACCORDANCE WITH THE MANUFACTURER OF THE SEAL, USING AN APPROVED TOOL THAT WILL NOT DAMAGE THE SEAL.
- (5) JOINT SUPPORT PLATES AND CURB PLATES SHALL BE SHOP WELDED TO EXPANSION JOINT STEEL AND SHALL BE NORMAL TO GRADE AFTER JOINT ASSEMBLY HAS BEEN ADJUSTED FOR ROADWAY CROSS-SLOPE AND GRADE. STEEL ANGLES SHALL BE ASSEMBLED WITH A CONSTANT JOINT OPENING TO ENSURE PROPER PERFORMANCE AND WATER TIGHTNESS.
- (6) IMMEDIATELY AFTER THE JOINT HAS BEEN SECURED TO THE STRUCTURAL STEEL AND BACKWALL, REMOVE SHIPPING DEVICES AND GRIND SMOOTH ANY WELDS ON EXPOSED SURFACES. REPAIR ANY DAMAGE TO GALVANIZED SURFACES IN ACCORDANCE WITH SECTION 550.
- (7) PROTECT TOP OF EXPANSION JOINT DURING PLACEMENT OF CONCRETE AND BITUMINOUS PAVEMENT.
- (8) THE COMPRESSION SEAL HAS BEEN DESIGNED FOR A TOTAL FACTORED MOVEMENT OF 0.73 INCHES. DESIGN INCLUDES MOVEMENT DUE TO TEMPERATURE, SKEW, SHRINKAGE AND MINIMUM INSTALLATION WIDTH. THE CONTRACTOR SHALL USE A WA-400 SEAL BY WATSON BOWMAN OR CV-4000 BY D.S. BROWN.
- (9) ELEVATIONS SHOWN AT TOP OF ANGLES ARE 1/8" LOWER THAN PROPOSED FINISHED ROADWAY GRADE.
- (10) ANGLES 6"x 4"x 3/4" SHALL BE UTILIZED FOR SEALS LESS THAN 5" (HEIGHT). FOR SEALS GREATER THAN OR EQUAL TO 5" (HEIGHT) STEEL ANGLES SHALL BE 8"x 4"x 3/4".

- (11) STEEL ANGLES AND STOP BARS SHALL BE MAINTAINED FREE FROM DIRT, WATER AND ANY OTHER LOOSE DEBRIS, WITH THE USE OF COMPRESSED AIR, TO ENSURE PROPER FIT OF THE SEAL. CARE SHALL BE TAKEN NOT TO DAMAGE GALVANIZED SURFACES.
- (12) A TEMPORARY SEAL(S) SHALL BE INSTALLED PRIOR TO THE START OF THE WINTER MAINTENANCE PERIOD FOR ALL JOINT ASSEMBLIES OR PORTIONS THEREOF THAT WILL BE IN PLACE THROUGHOUT THE WINTER. ALL TEMPORARY SEALS SHALL BE REMOVED AND JOINT OPENINGS AND SUBSTRUCTURE SHALL BE CLEANED PRIOR TO INSTALLING THE FINAL SEAL. ALL COSTS SHALL BE SUBSIDIARY TO ITEM 560.1001.
- (13) FOR SECTIONS A-A THROUGH D-D SEE BRIDGE SHEET 8.



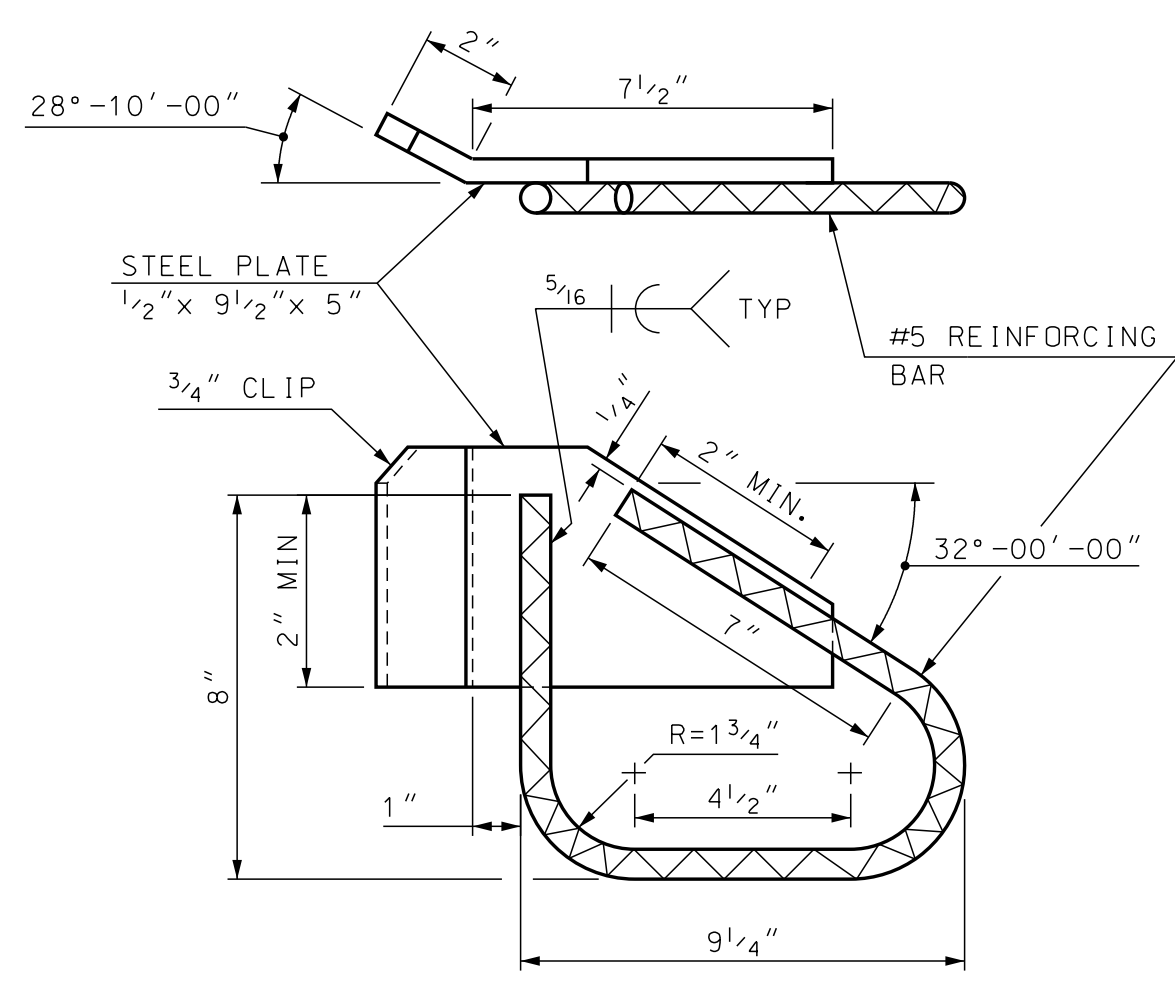
UNCOMPRESSED SEAL

NOT TO SCALE



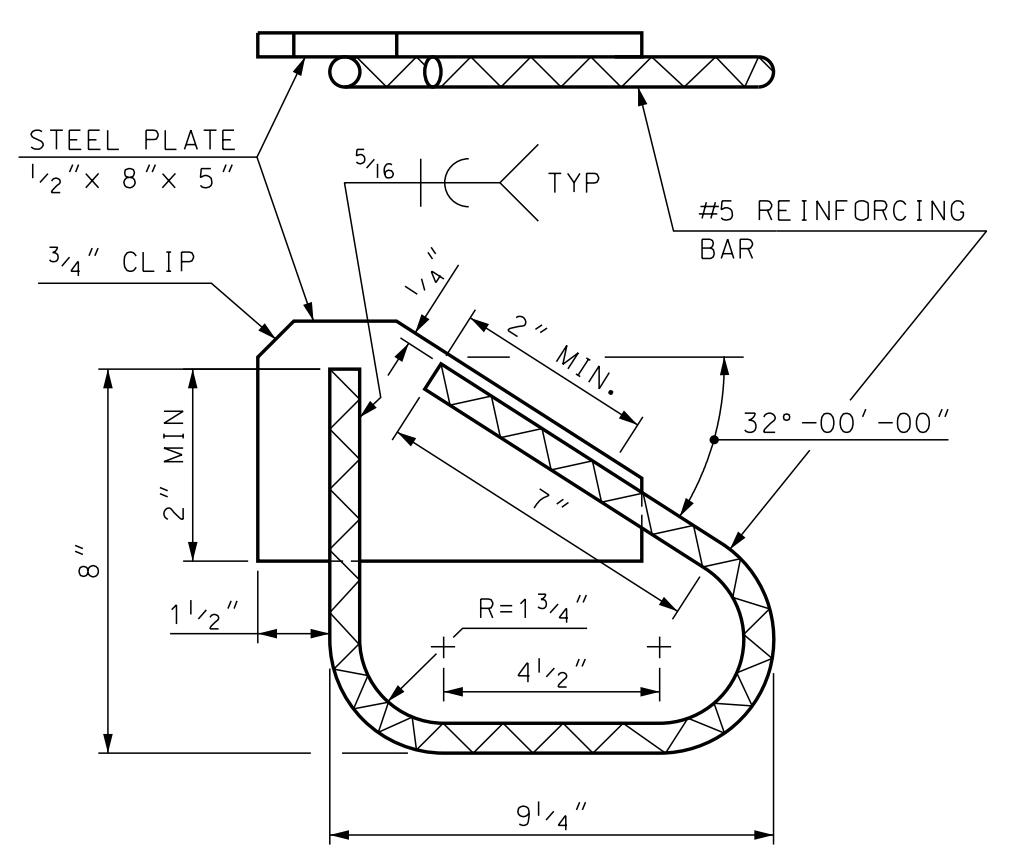
RELIEF CUT DETAILS

NOT TO SCALE



DECK ANCHORAGE DETAIL

SCALE: 3" = 1'-0"

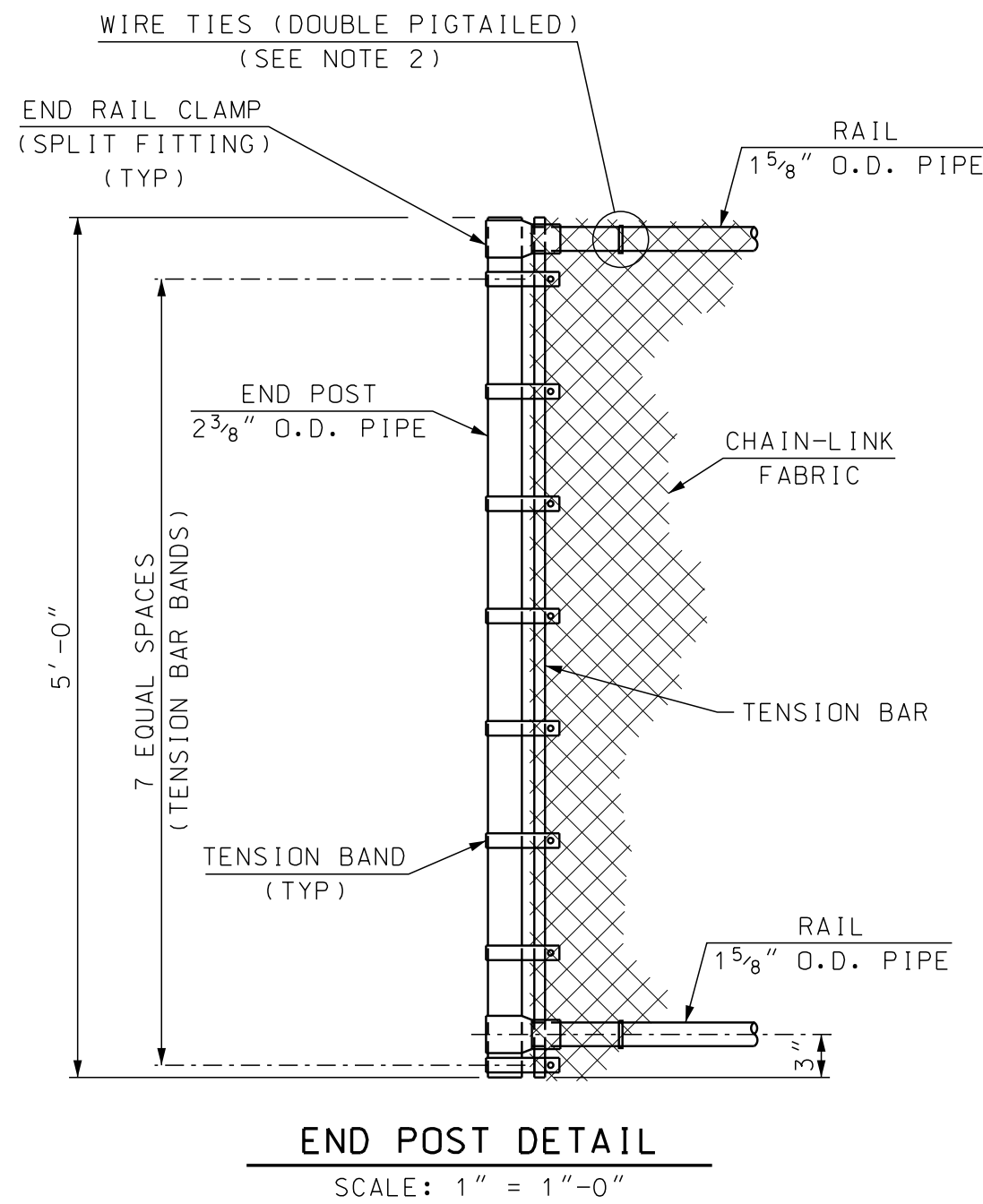
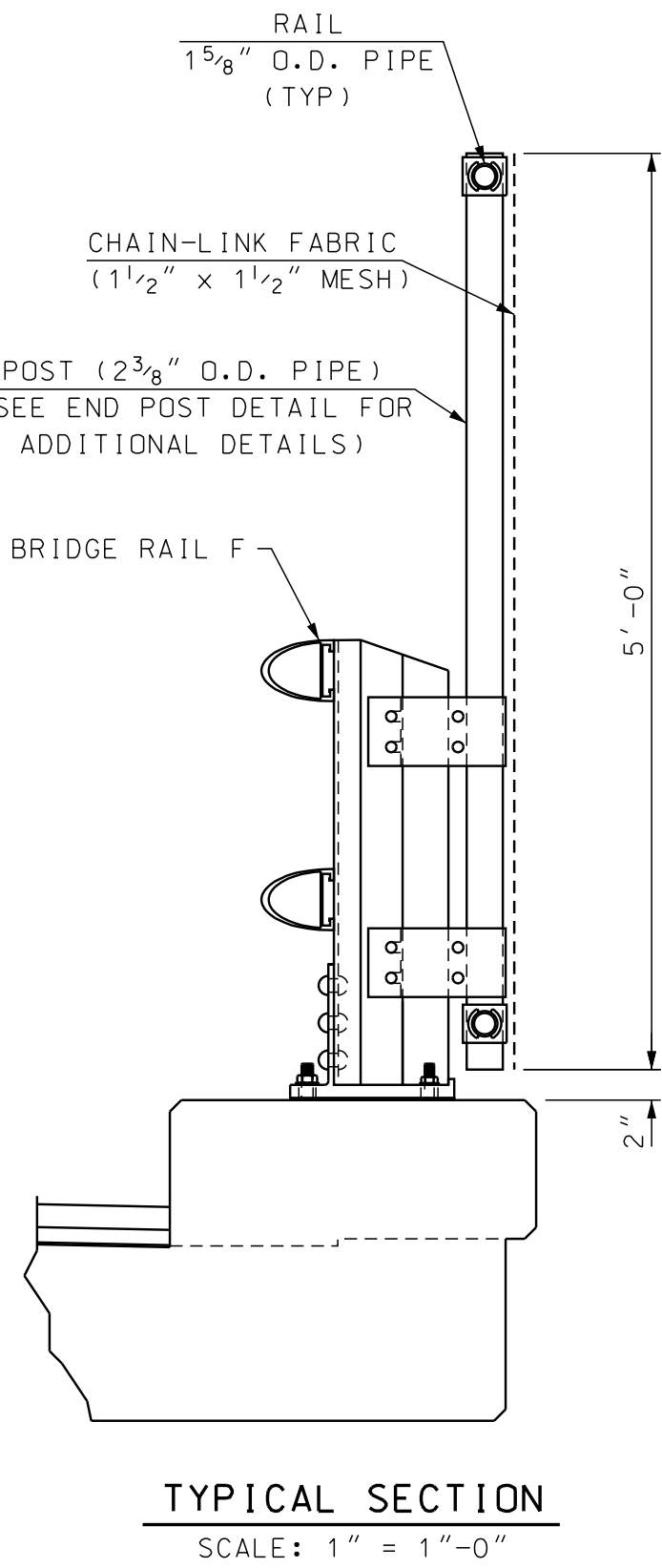
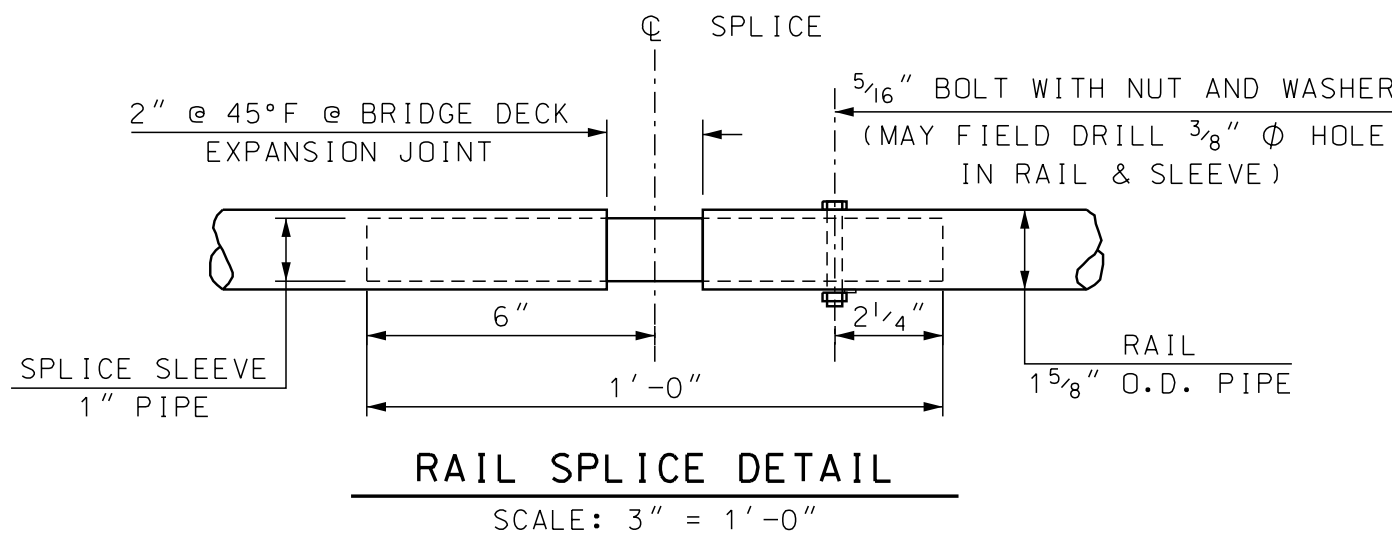
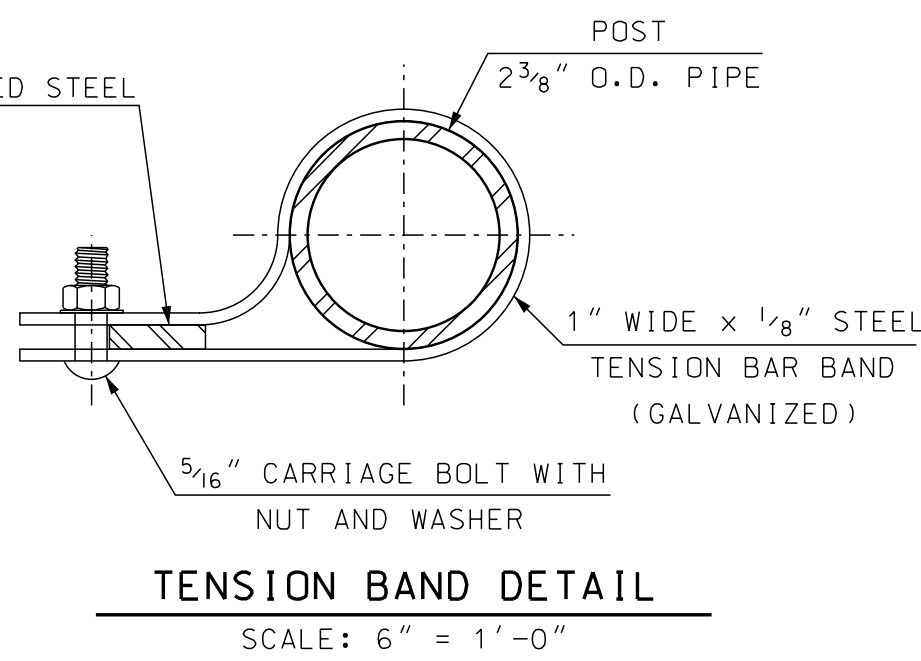
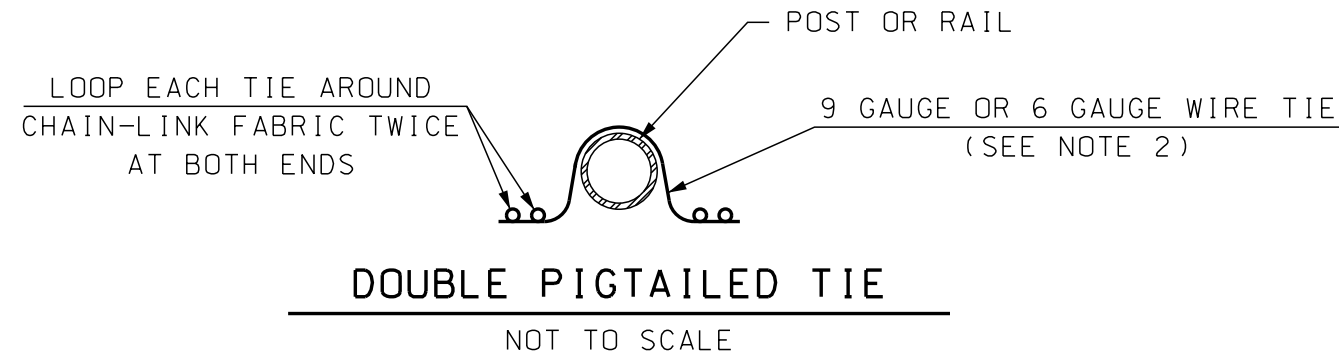
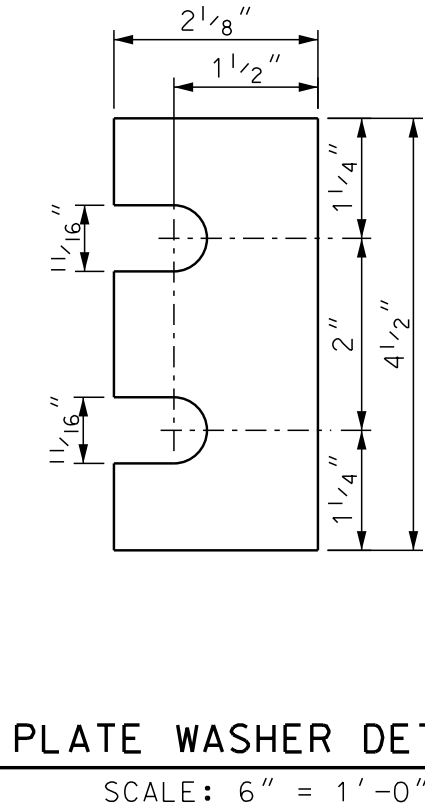
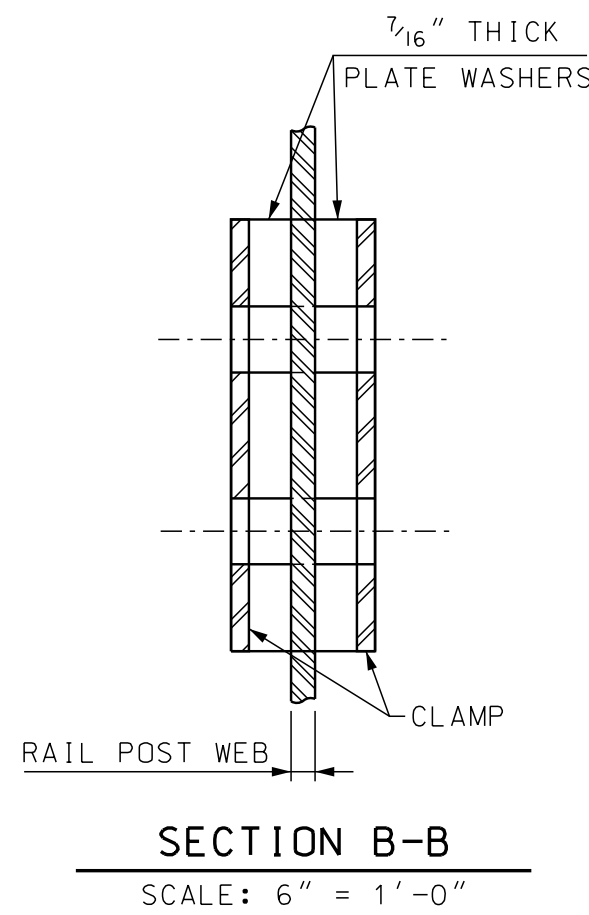
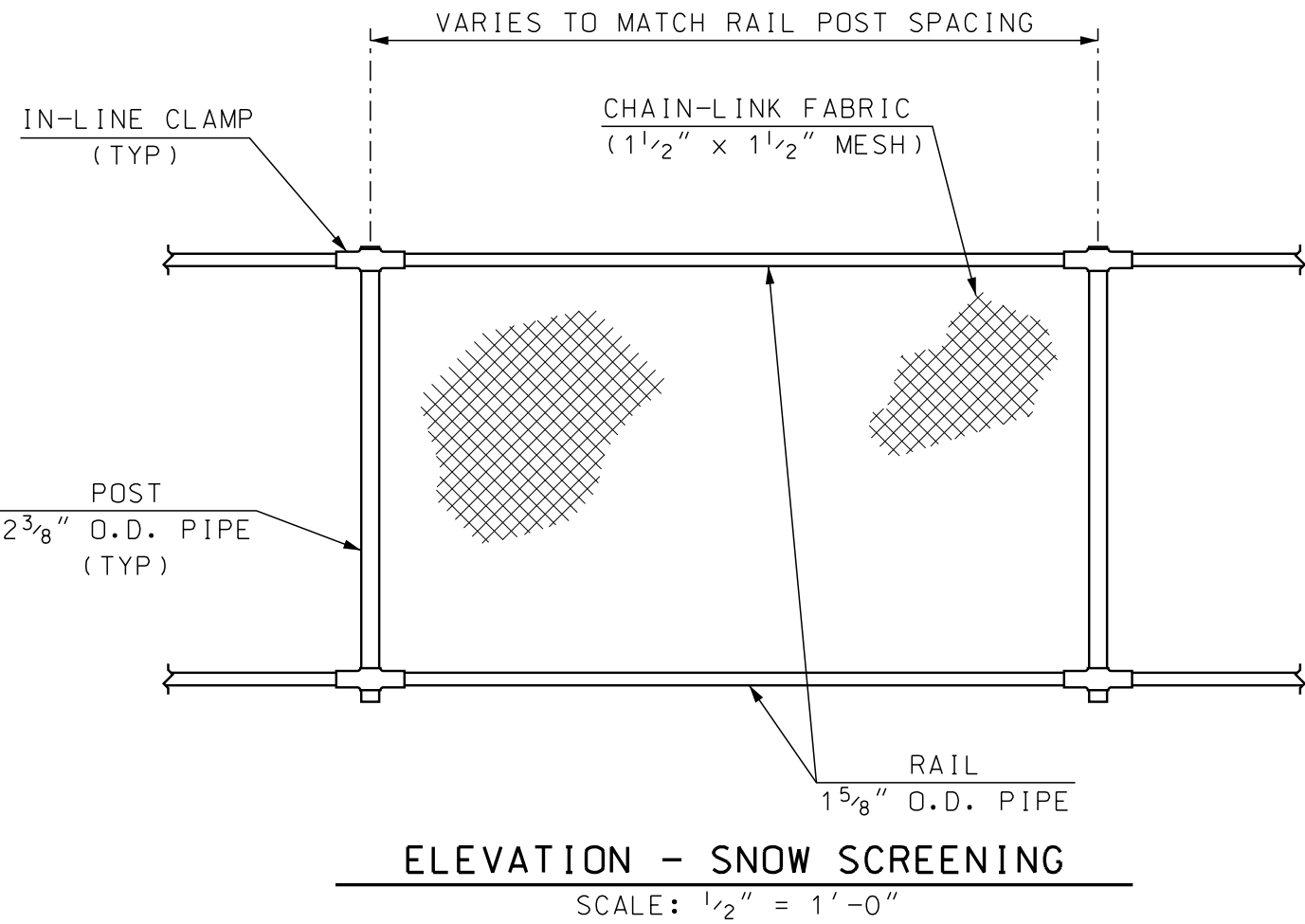
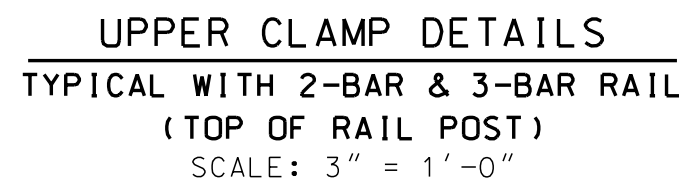
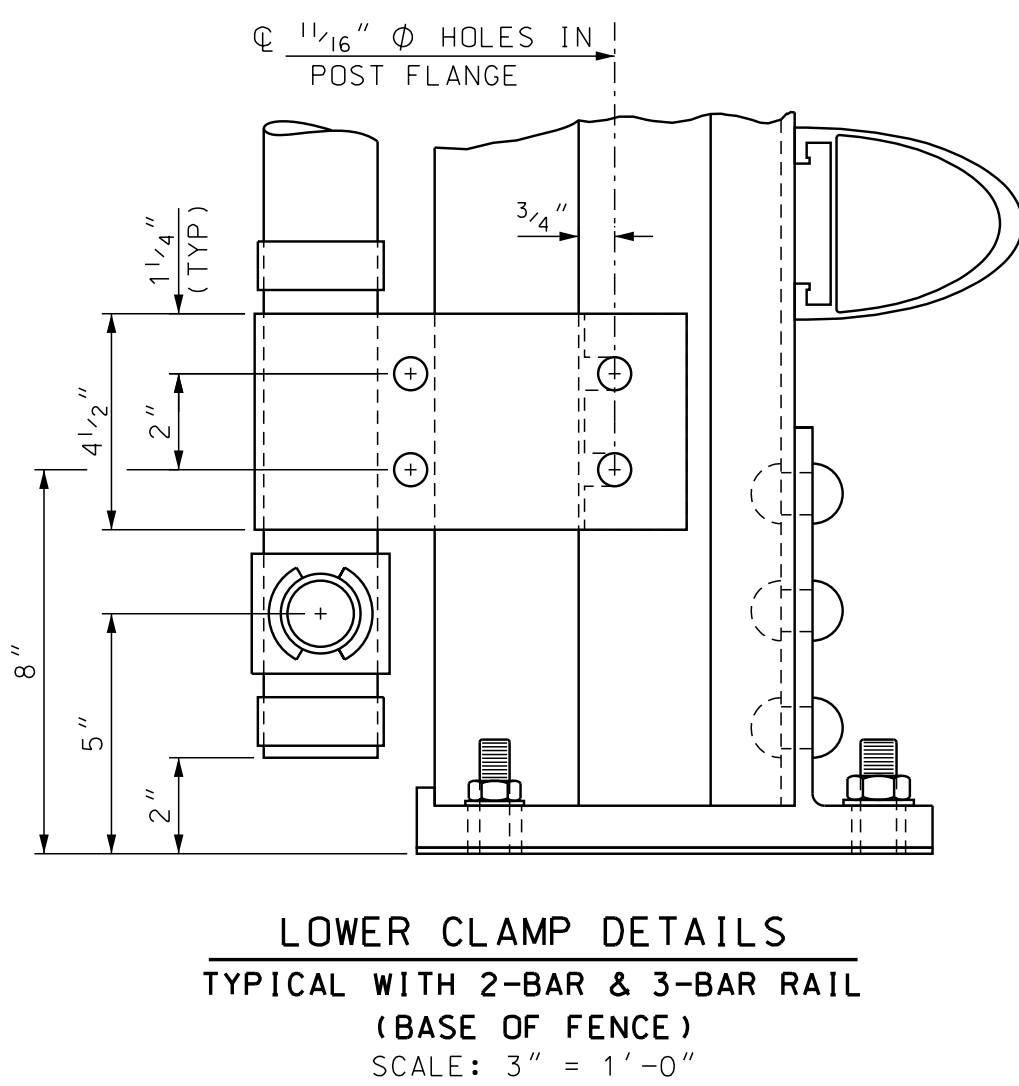
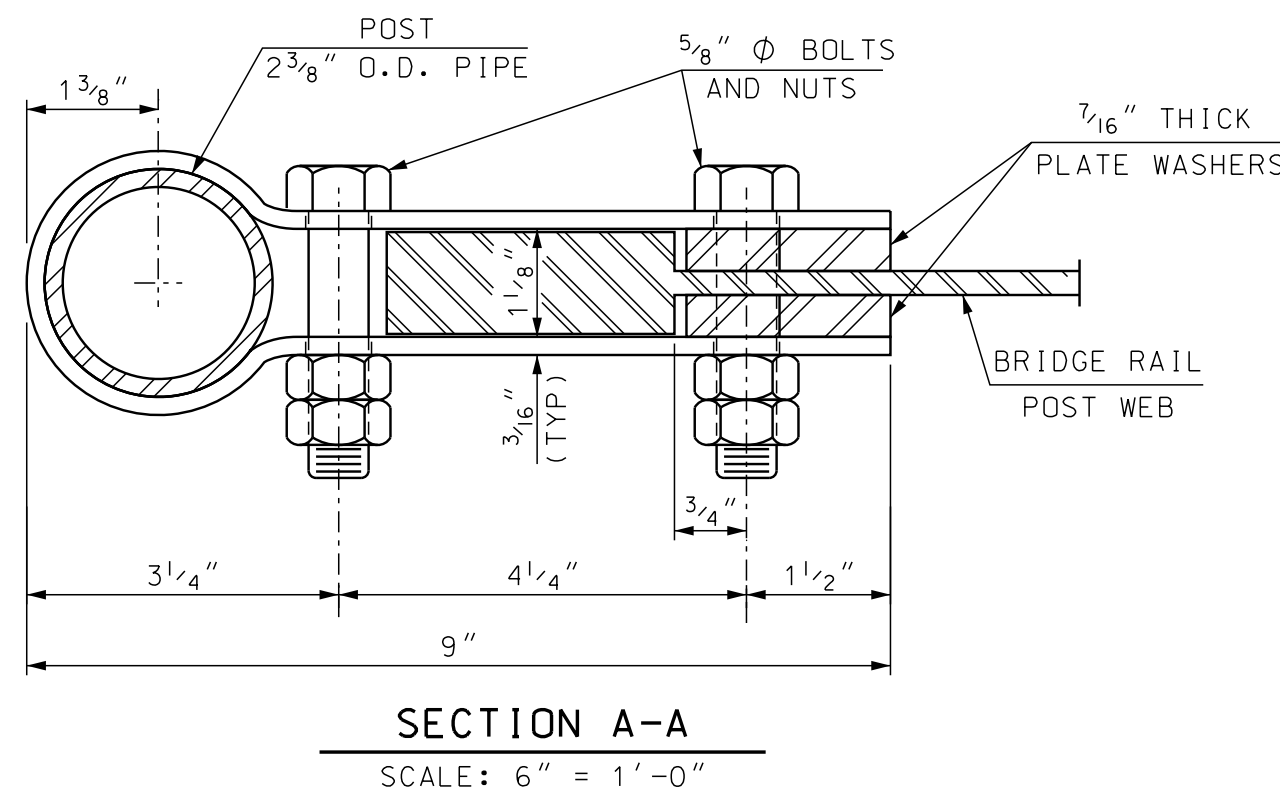
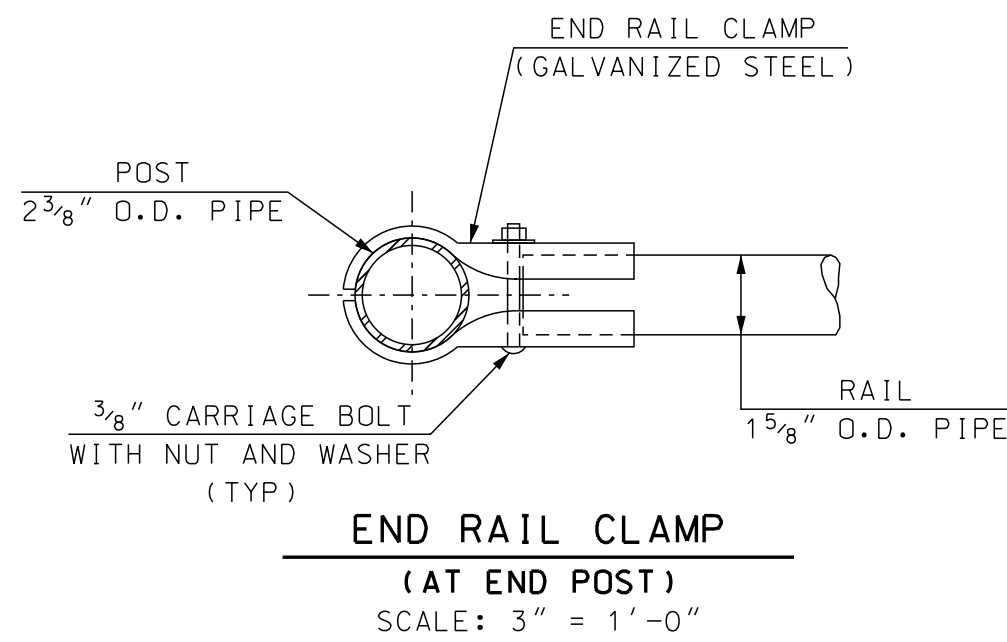
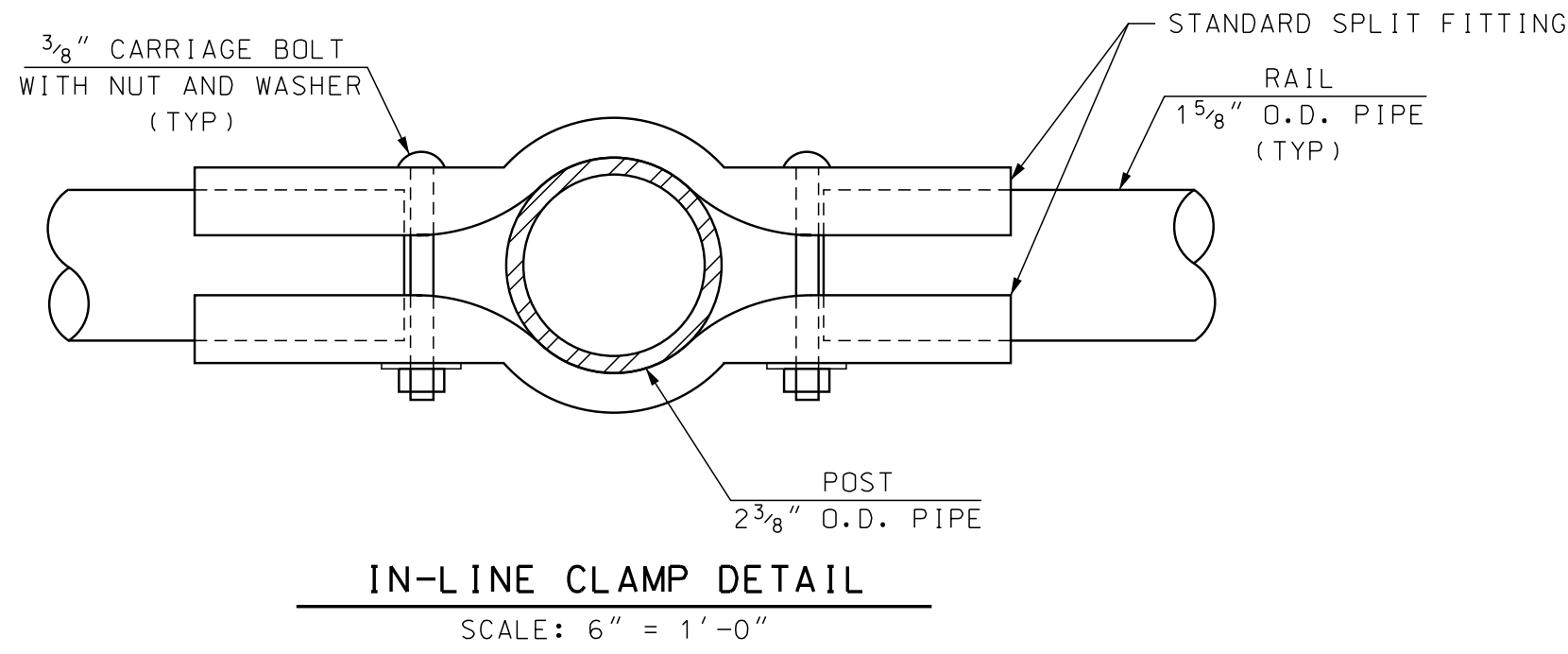


STUBWALL ANCHORAGE DETAIL

SCALE: 3" = 1'-0"

As-Built Plans

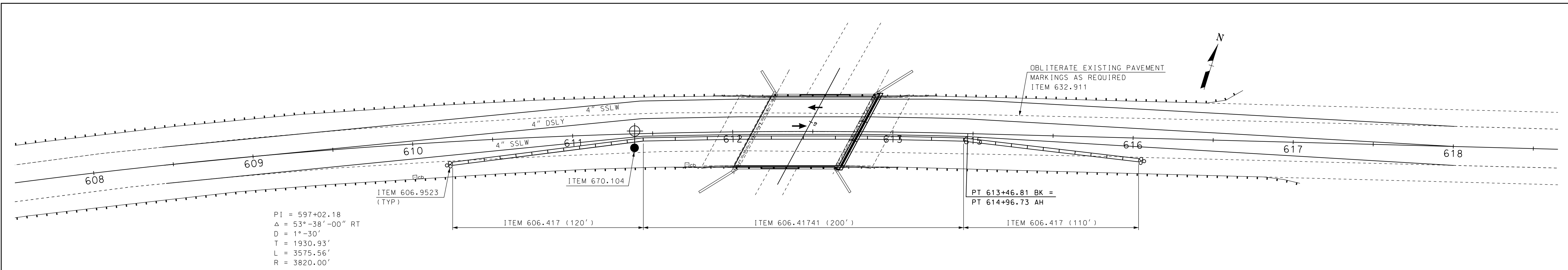
STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BARNSTEAD			BRIDGE NO.		097/089		STATE PROJECT	41301
LOCATION NH ROUTE 28 over BEAUTY HILL RD									
COMPRESSION SEAL EXPANSION JOINT (1 OF 2)									BRIDGE SHEET
REVISIONS AFTER PROPOSAL				BY	DATE	BY	DATE	7	OF 14
				DESIGNED	SMG	9/17	CHECKED	JAT	7/18
				DRAWN	SMG	9/17	CHECKED	JAT	7/18
				QUANTITIES	SMG	7/18	CHECKED	JAT	7/18
				ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
				REV. DATE		-----		11	23



GENERAL NOTES

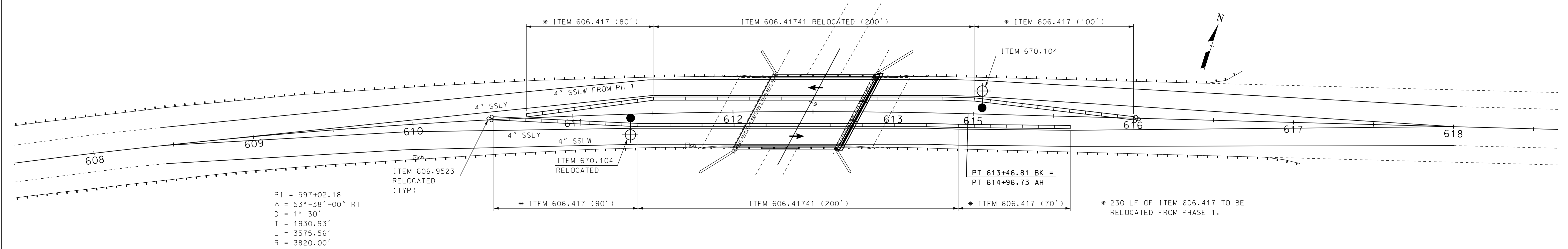
- CHAIN-LINK FABRIC SHALL BE 9 GAUGE STEEL, ALUMINUM-COATED CONFORMING TO ASHTO M 181, TYPE II (ASTM A 491). CHAIN-LINK FABRIC SHALL BE KNUCKLED ON TOP AND BOTTOM. THE SIZE OF WIRE MESH (FABRIC) SHALL BE 1 1/2".
- WIRE TIES SHALL BE STANDARD ROUND 9 GAUGE ALUMINUM-COATED STEEL OR 6 GAUGE ALUMINUM ALLOY CONFORMING TO ASTM F 626. ALL TIES SHALL BE WRAPPED AROUND CHAIN-LINK FABRIC TWICE (DOUBLE PIGTAILED) AT BOTH ENDS. SPACE TIES @ 6" O.C. TO BOTTOM RAIL AND @ 12" O.C. TO ALL POSTS AND OTHER RAILS.
- POSTS AND RAIL PIPES SHALL BE HOT-DIP GALVANIZED STEEL CONFORMING TO AASHTO M 181, GRADE 1 (ASTM F 1083). ALL PIPES SHALL BE SCHEDULE 40, STANDARD WEIGHT.
- TENSION BARS, BAR BANDS, IN-LINE CLAMPS AND END RAIL CLAMPS SHALL BE STEEL. STEEL COMPONENTS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 111 (ASTM A 123) OR AASHTO M 232 (ASTM A 153) AS APPLICABLE. ALL BAR BANDS SHALL HAVE A BEVELED EDGE.
- ALL BOLTS AND NUTS SHALL BE STEEL CONFORMING TO ASTM A 307 AND ASTM A 563 GRADE A RESPECTIVELY. WASHERS SHALL BE HARDENED STEEL COMMERCIAL TYPE A PLAIN AND SHALL MEET THE DIMENSIONAL REQUIREMENTS OF ANSI B18.22. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 111 (ASTM A 123) OR AASHTO M 232 (ASTM A 153) AS APPLICABLE.
- RAIL SPLICES SHALL BE PROVIDED AT BRIDGE DECK EXPANSION JOINT(S) AND BRIDGE RAIL SPLICES AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
- RAIL MAY BE FIELD CUT (SAWN) TO FIT POST SPACING. GALVANIZED RAIL, CUT OR DRILLED AS ALLOWED, SHALL BE TOUCHED-UP IN ACCORDANCE WITH 563.3.2.2.3.
- ALL COSTS FOR CHAIN-LINK FABRIC, POSTS, RAILS AND APPURTENANCES SHALL BE INCLUDED IN ITEM 563.95, SNOW SCREENING FOR OVERPASS STRUCTURES.

STATE OF NEW HAMPSHIRE										
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN										
TOWN		BARNSTEAD		BRIDGE NO.		STATE PROJECT		41301		
LOCATION										
SNOW SCREEN WITH ALUMINUM BRIDGE RAIL								BRIDGE SHEET		
REVISIONS AFTER PROPOSAL			BY		DATE		BY		DATE	
			DESIGNED	NHDOT	4/06		CHECKED	NHDOT	4/06	
			DRAWN	GMC/PJP	6/06		CHECKED	PJP/MGL	6/06	
			QUANTITIES	---	---		CHECKED	---	---	
			ISSUE DATE	4/21/06		FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS
			REV. DATE	11/1/16		-----		13		23



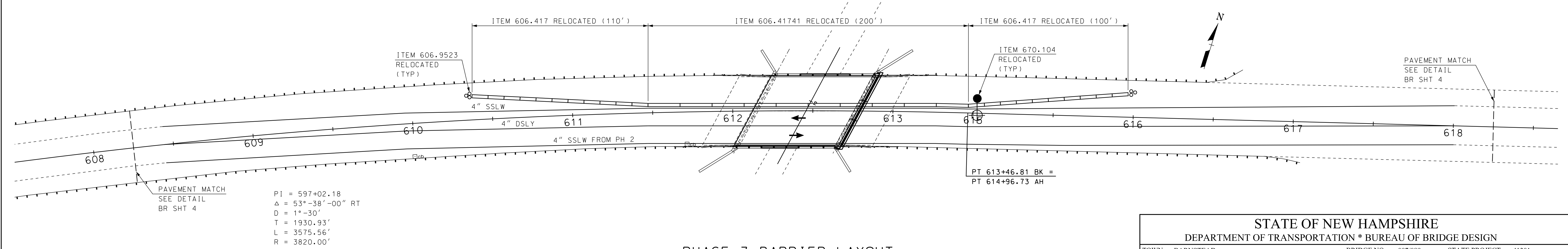
PHASE 1 BARRIER LAYOUT

SCALE: 1" = 30'-0"



PHASE 2 BARRIER LAYOUT

SCALE: 1" = 30'-0"



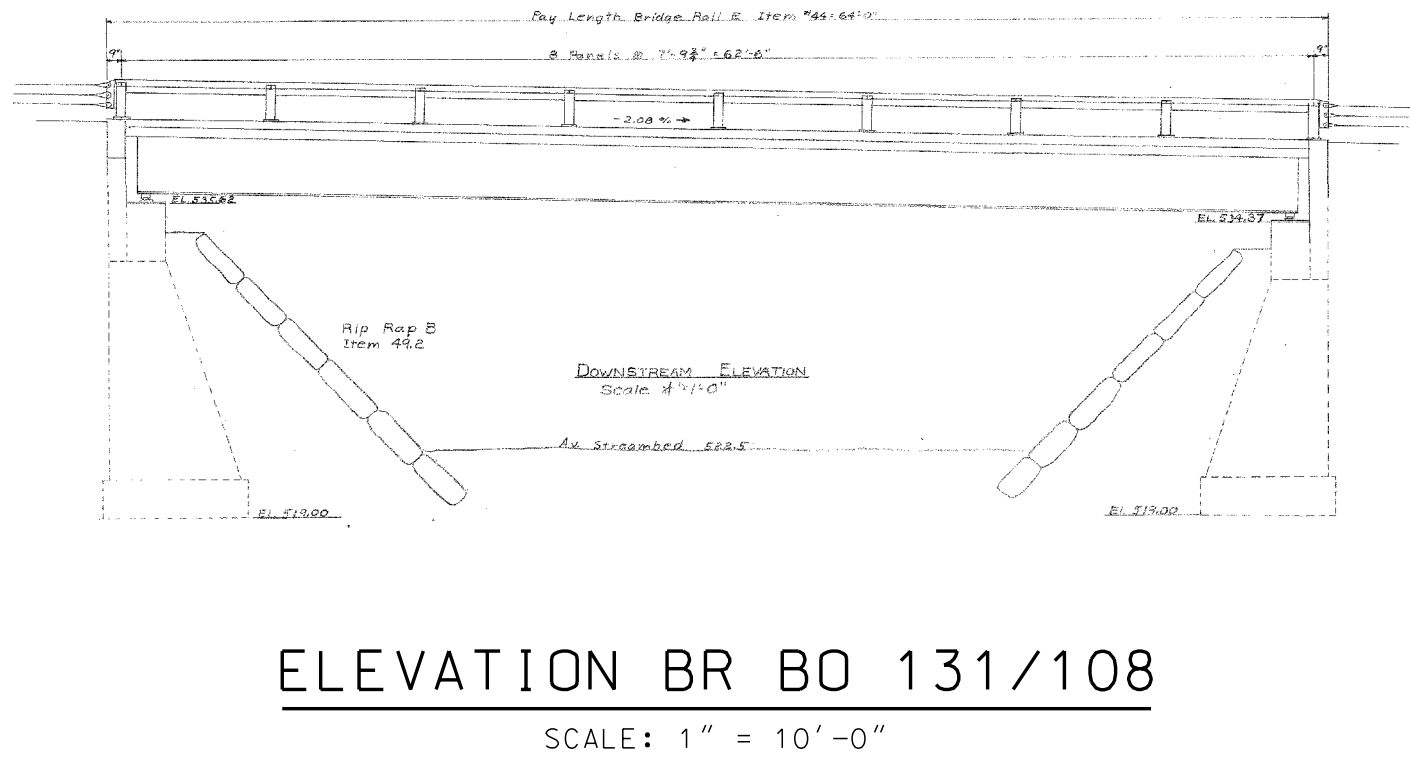
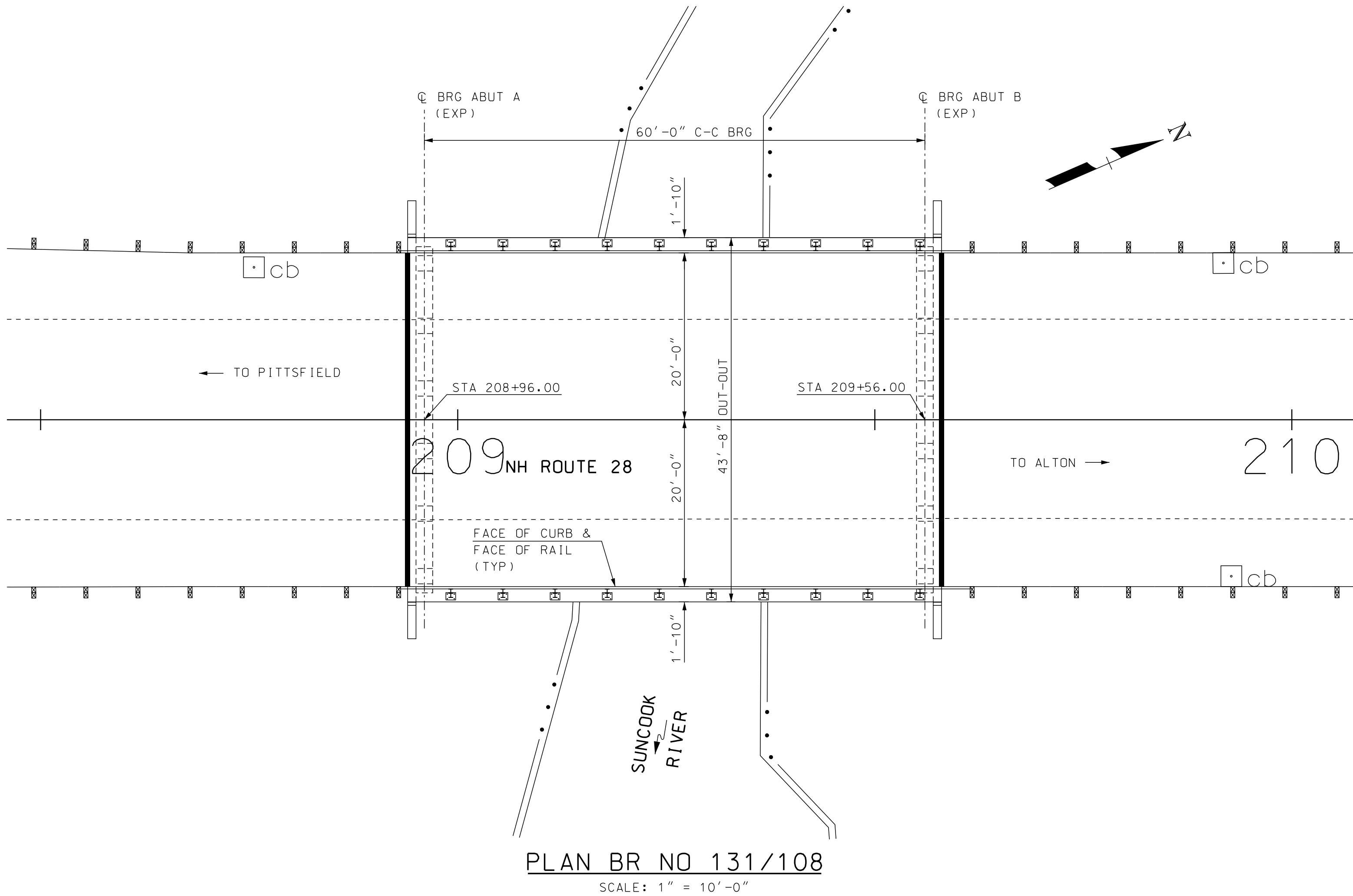
PHASE 3 BARRIER LAYOUT

SCALE: 1" = 30'-0"

NOTE:
ALL RELOCATED QUANTITIES ARE SUBSIDIARY
TO THE ITEM REFERENCED.

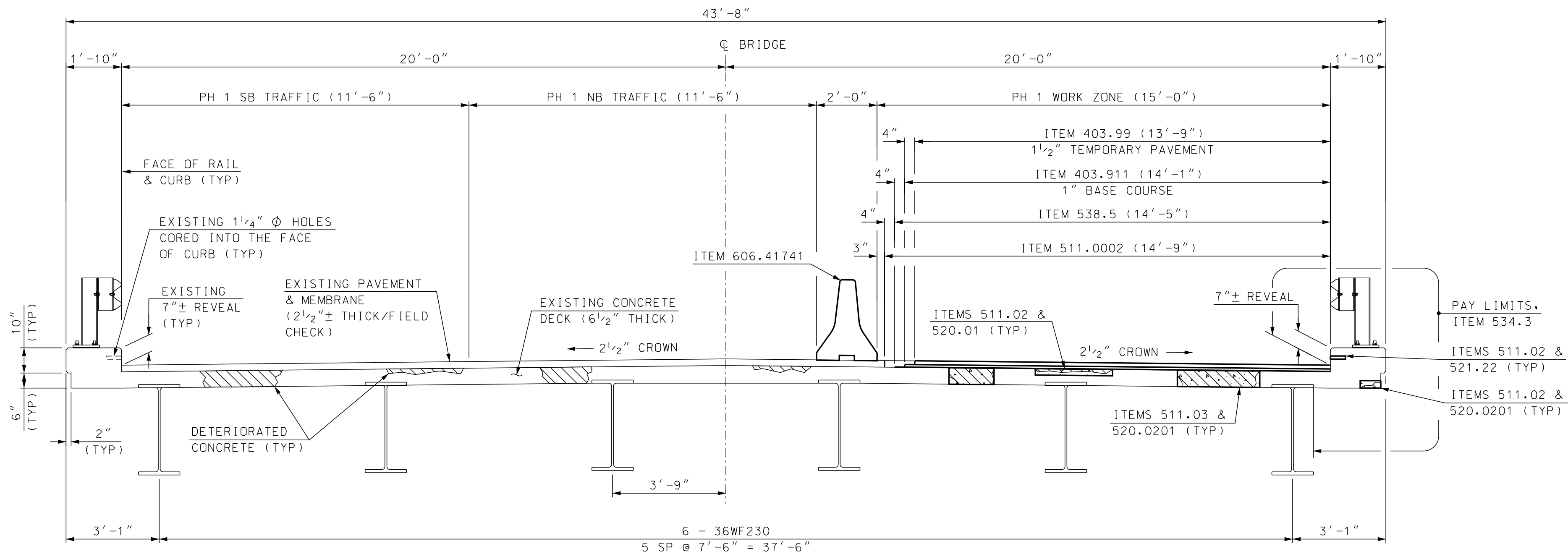
STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BARNSTEAD	BRIDGE NO.	097/089	STATE PROJECT	41301	BRIDGE SHEET			
LOCATION NH ROUTE 28 over BEAUTY HILL Rd						10 OF 14			
BARRIER LAYOUT BR NO 097/089								FILE NUMBER	
	REVISIONS AFTER PROPOSAL			BY	DATE	BY	DATE	134-4-1	
								TOTAL SHEETS	
				DESIGNED	SMG	10/17	CHECKED	JAT	7/18
				DRAWN	SMG	10/17	CHECKED	JAT	7/18
				QUANTITIES	SMG	7/18	CHECKED	JAT	7/18
				ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	
				REV. DATE		-----		14	23

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
097-089 Beauty Hill Rd	097-089 traf	AS NOTED



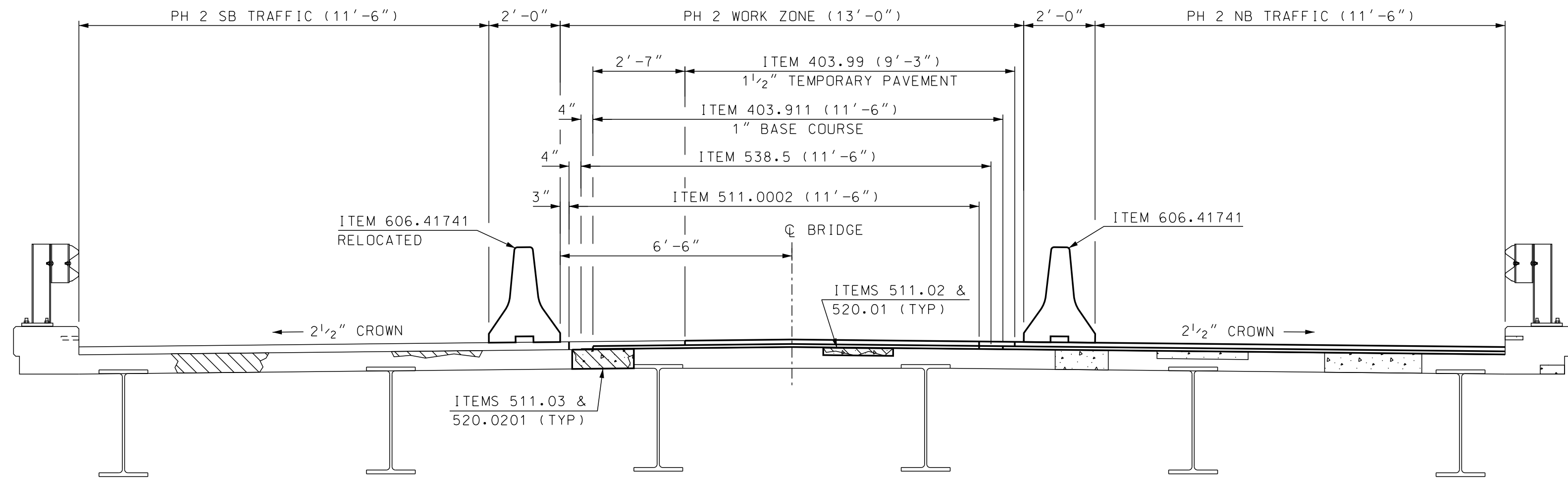
STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BARNSTEAD	BRIDGE NO.	131/108	STATE PROJECT	41301	LOCATION			
GENERAL PLAN AND ELEVATION BR NO 131/108								BRIDGE SHEET	
REVISIONS AFTER PROPOSAL				BY	DATE	CHECKED	BY	DATE	11 OF 14
DESIGNED				SMG	9/17	CHECKED	JAT	7/18	FILE NUMBER
DRAWN				SMG	9/17	CHECKED	JAT	7/18	134-4-1
QUANTITIES				SMG	7/18	CHECKED	JAT	7/18	TOTAL SHEETS
ISSUE DATE				FEDERAL PROJECT NO.			SHEET NO.		15
REV. DATE				-----			15		23

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
131-108 Suncook River	131-108 Genplan	AS NOTED



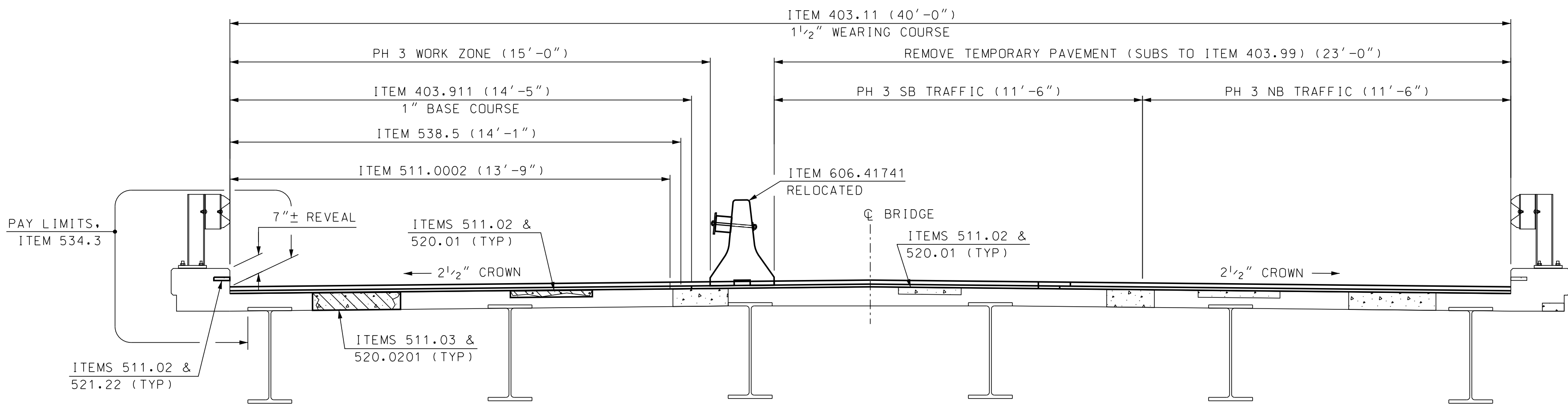
PHASE 1 CONSTRUCTION

SCALE: 3/8" = 1'-0"



PHASE 2 CONSTRUCTION

SCALE: 3/8" = 1'-0"

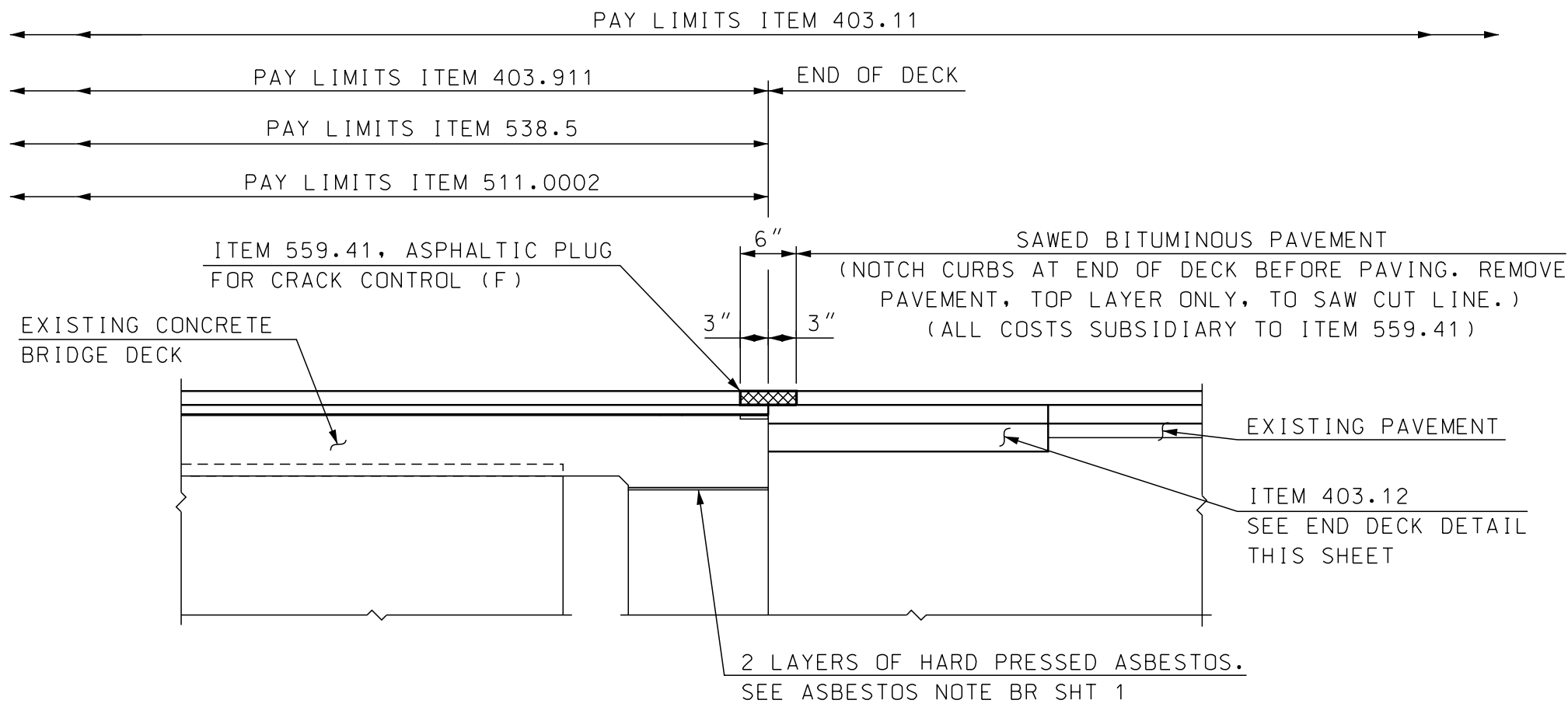


PHASE 3 CONSTRUCTION

SCALE: 3/8" = 1'-0"

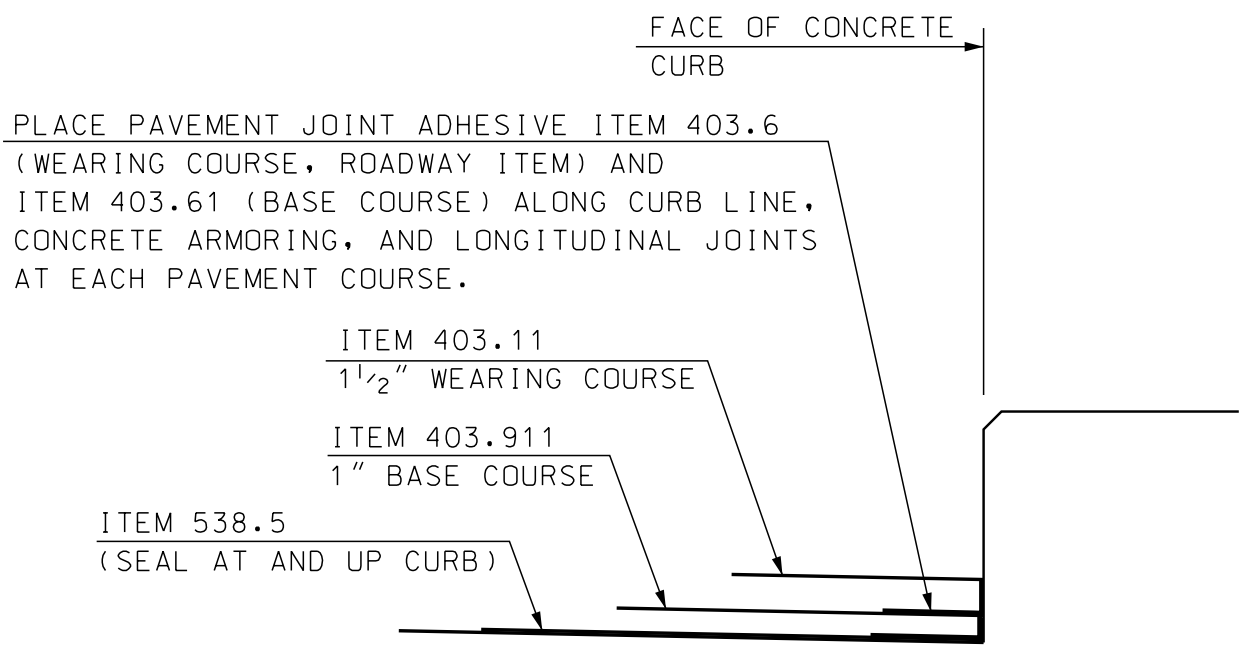
STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BARNSTEAD		BRIDGE NO.		131/108		STATE PROJECT		41301
LOCATION NH ROUTE 28 over SUNCOOK RIVER									
PHASING BR NO 131/108									BRIDGE SHEET
REVISIONS AFTER PROPOSAL					BY	DATE	BY	DATE	12 OF 14
			DESIGNED	SMG	9/17	CHECKED	JAT	7/18	FILE NUMBER
			DRAWN	SMG	9/17	CHECKED	JAT	7/18	134-4-1
			QUANTITIES	SMG	7/18	CHECKED	JAT	7/18	
			ISSUE DATE		FEDERAL PROJECT NO.			SHEET NO.	TOTAL SHEETS
			REV. DATE		-----			16	23

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
131-108 Suncook River	131-108 Deck	AS NOTED



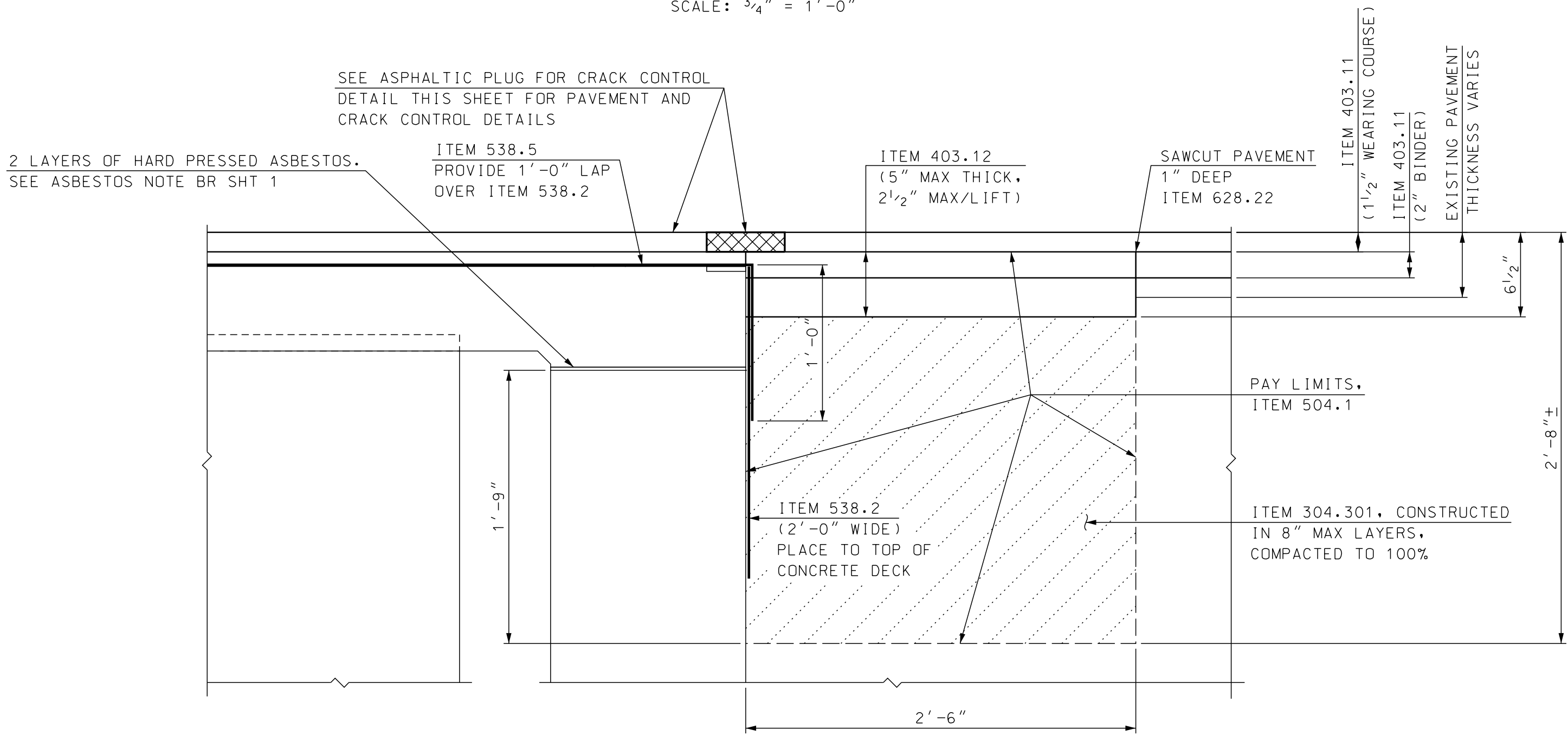
**ASPHALTIC PLUG FOR CRACK CONTROL
(ABUTMENTS A & B)**

(ABUT B SHOWN, ABUT A SIMILAR)
SCALE: 3/4" = 1'-0"



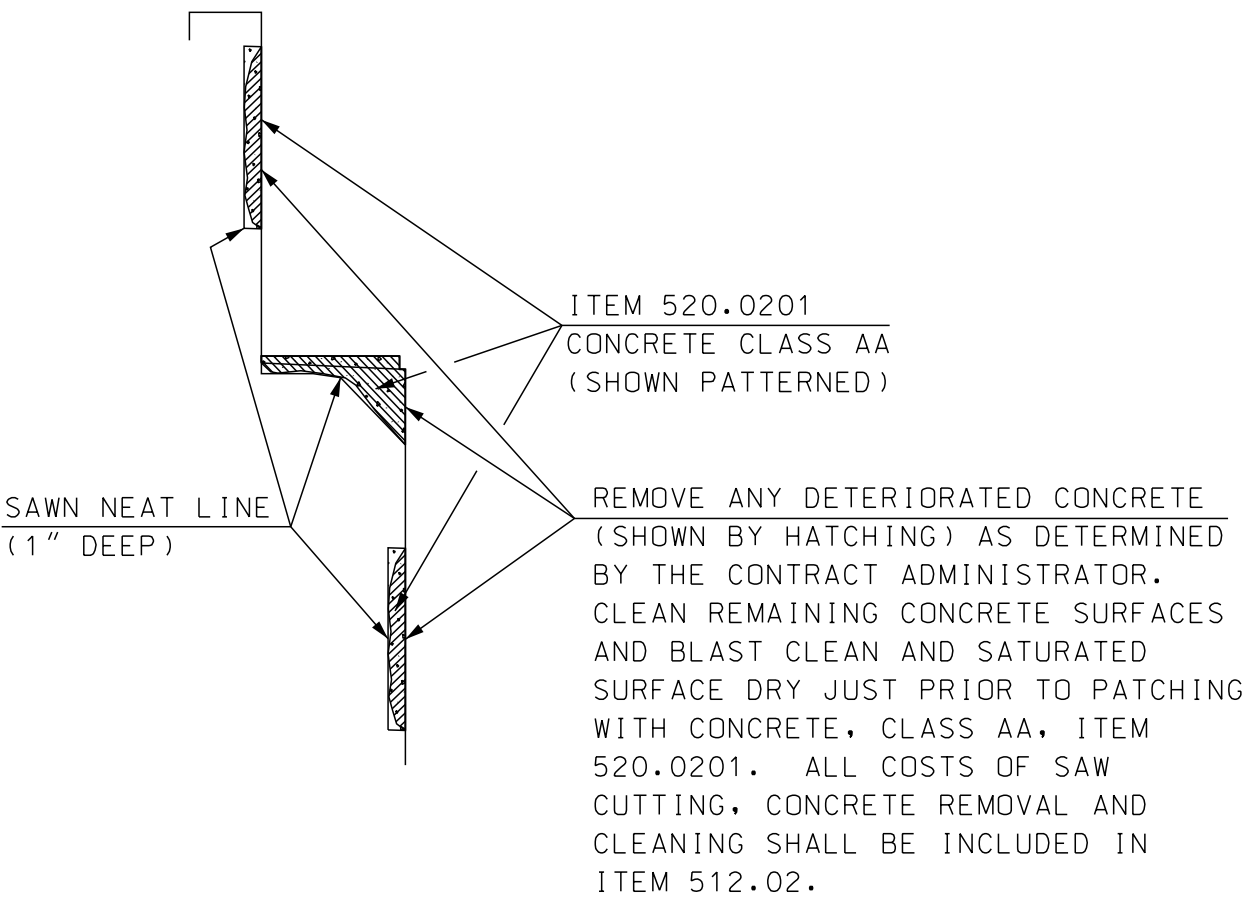
CURB DETAIL

SCALE: 1 1/2" = 1'-0"



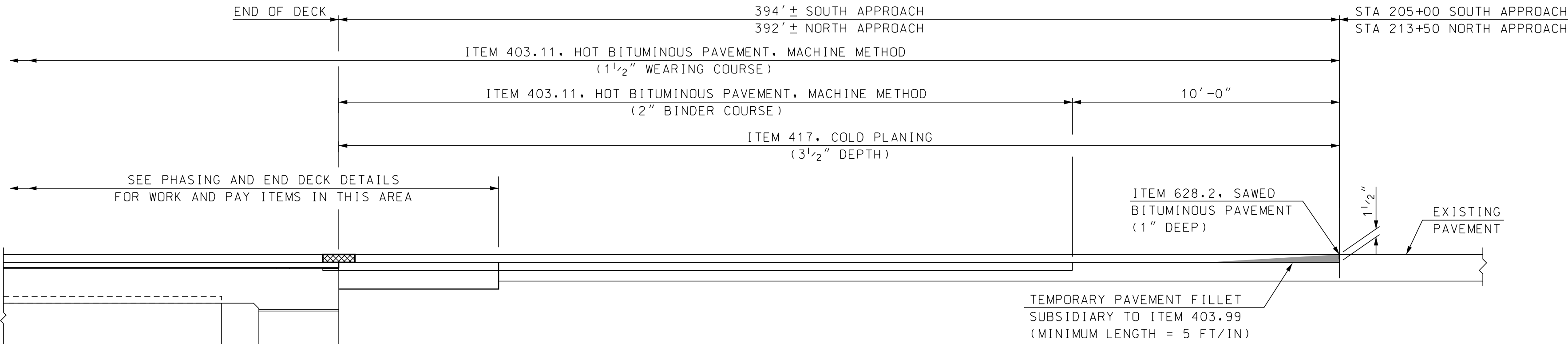
END DECK DETAIL

(ABUT B SHOWN, ABUT A SIMILAR)
SCALE: 1 1/2" = 1'-0"



**TYPICAL ABUTMENT AND WINGWALL
CONCRETE REPAIRS**

(ABUTMENT SHOWN, WINGWALL SIMILAR)
NOT TO SCALE

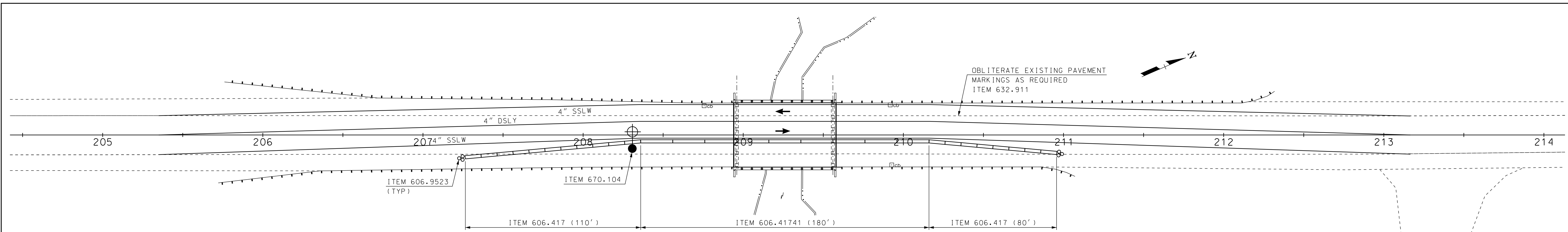


PAVEMENT MATCH DETAIL

NOT TO SCALE

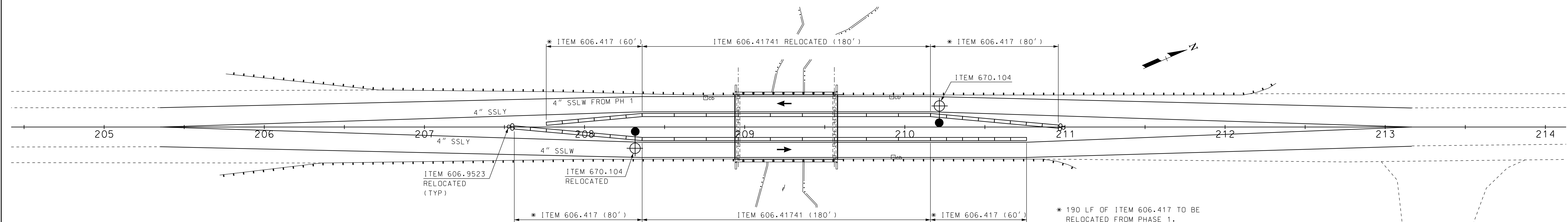
STATE OF NEW HAMPSHIRE											
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN											
TOWN		BARNSTEAD		BRIDGE NO.		131/108		STATE PROJECT		41301	
LOCATION		NH ROUTE 28 over SUNCOOK RIVER									
DETAILS BR NO 131/108										BRIDGE SHEET	
REVISIONS AFTER PROPOSAL				BY		DATE		BY		DATE	
				DESIGNED	SMG	9/17	CHECKED	JAT	7/18	13 OF 14	
				DRAWN	SMG	9/17	CHECKED	JAT	7/18	FILE NUMBER	
				QUANTITIES	SMG	7/18	CHECKED	JAT	7/18	134-4-1	
				ISSUE DATE		FEDERAL PROJECT NO.			SHEET NO.		TOTAL SHEETS
				REV. DATE		-----			17		23

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
131-108 Suncook River	131-108 Details	AS NOTED



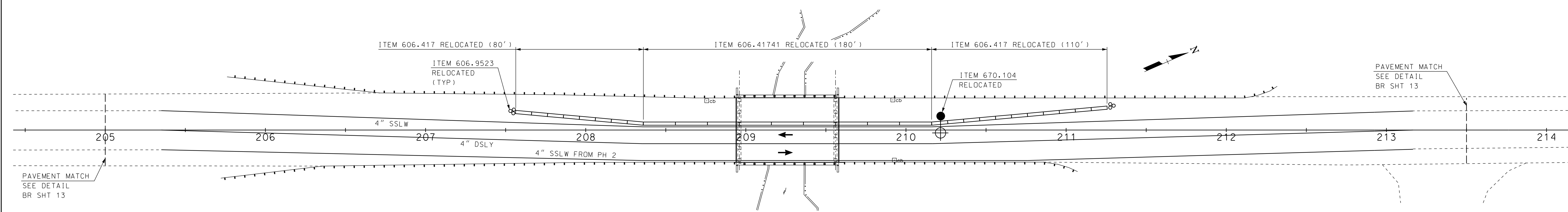
PHASE 1 BARRIER LAYOUT

SCALE: 1" = 30'-0"



PHASE 2 BARRIER LAYOUT

SCALE: 1" = 30'-0"



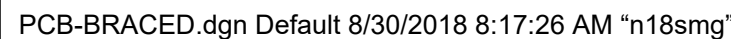
PHASE 3 BARRIER LAYOUT

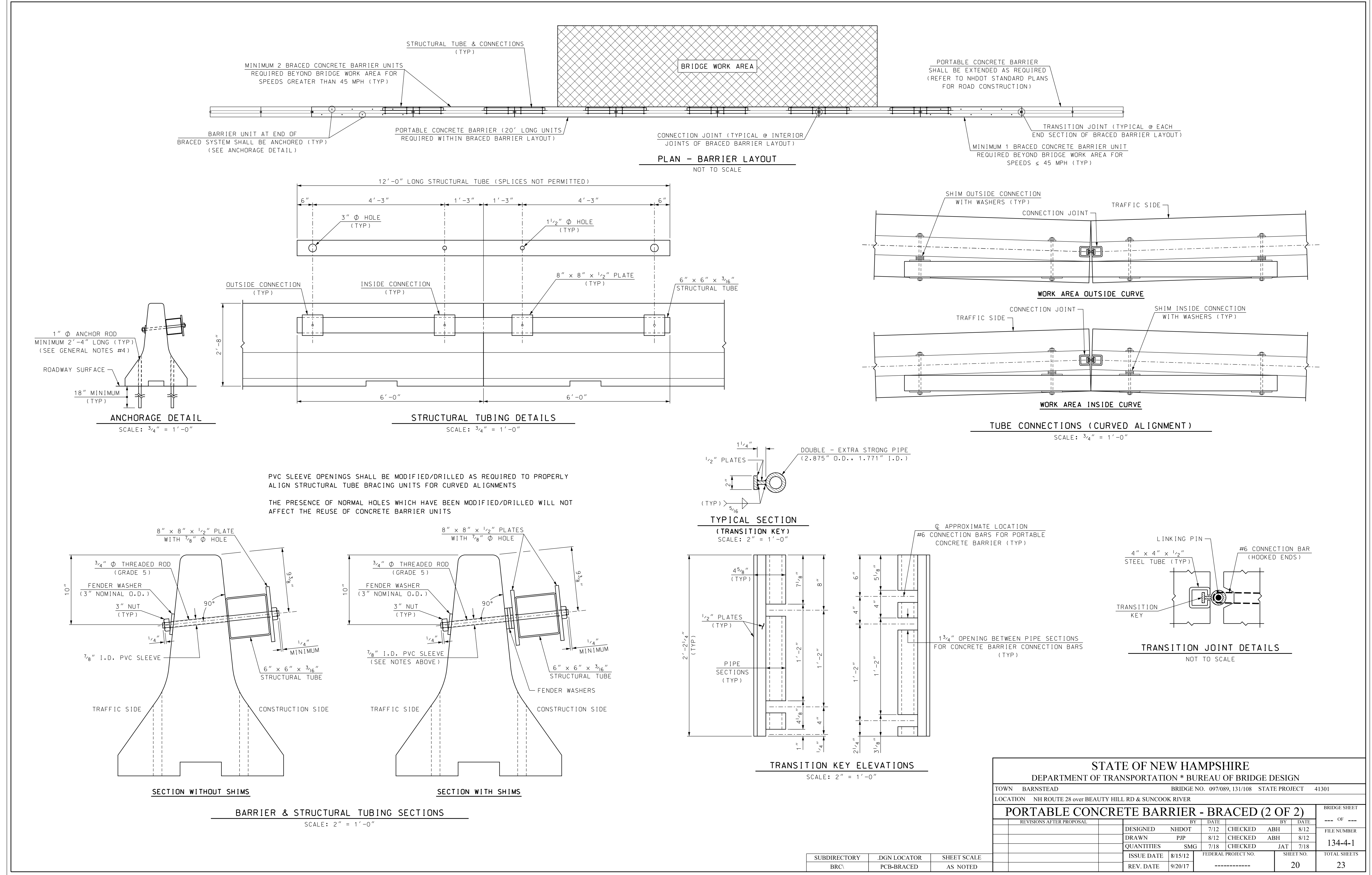
SCALE: 1" = 30'-0"

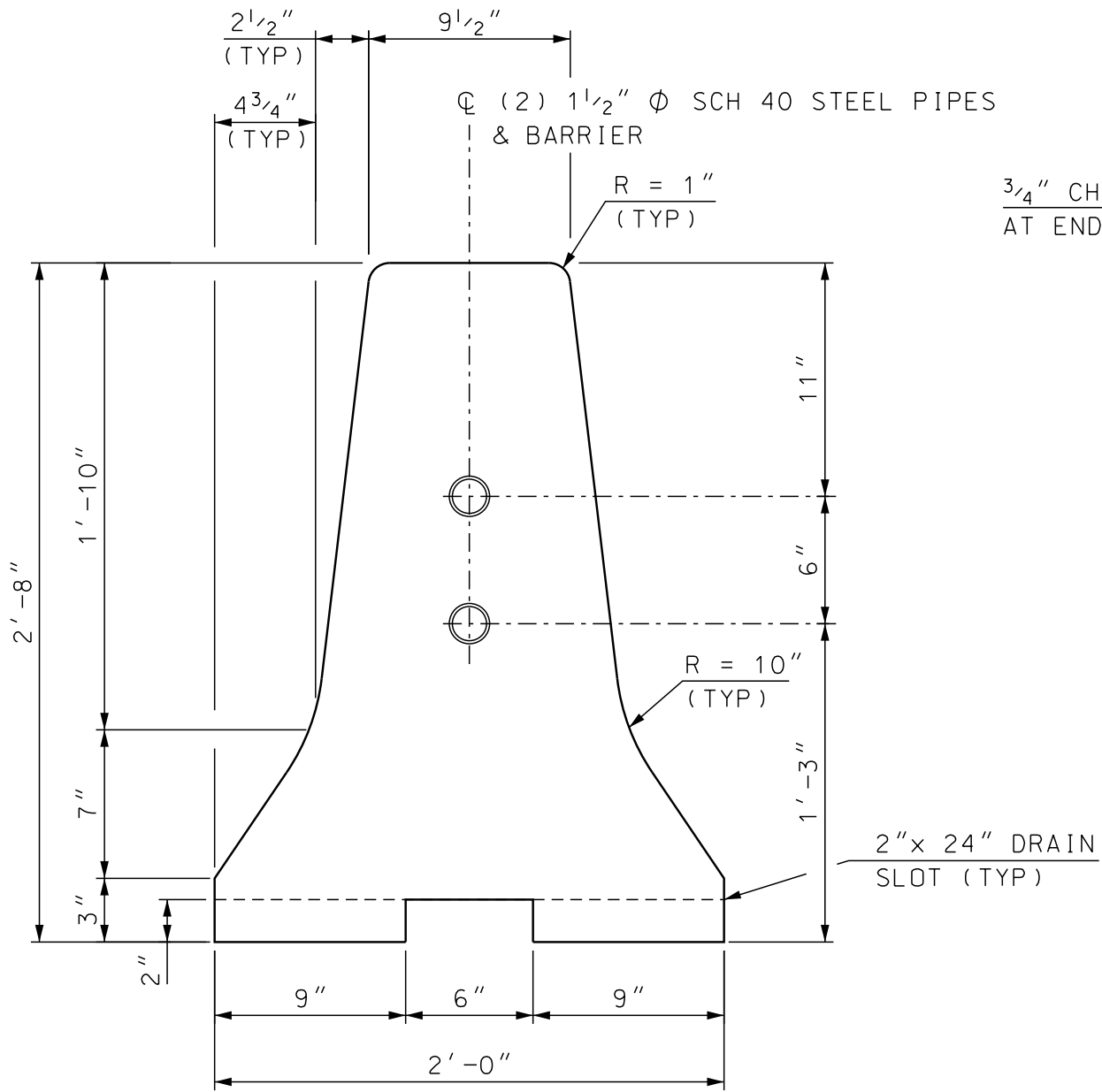
NOTE:
ALL RELOCATED QUANTITIES ARE SUBSIDIARY
TO THE ITEM REFERENCED.

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
131-108 Suncook River	131-108 traf	AS NOTED

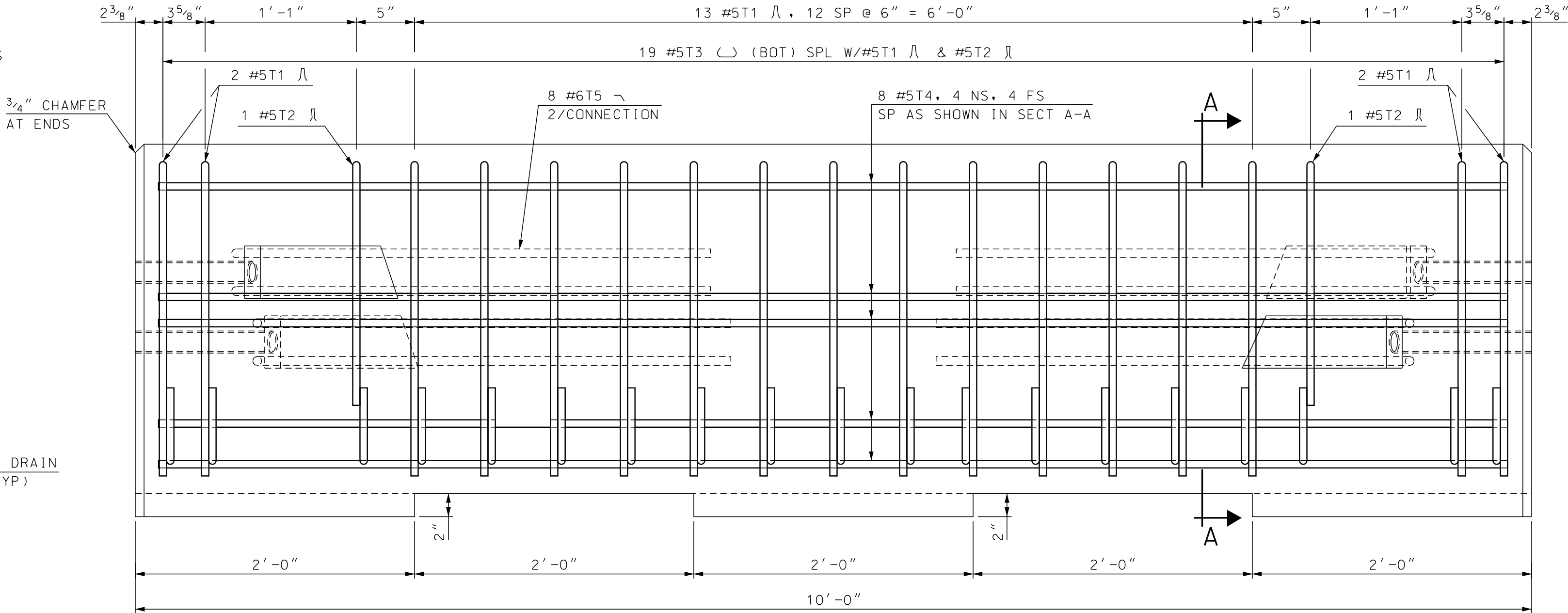
STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BARNSTEAD		BRIDGE NO.		131/108		STATE PROJECT		41301
LOCATION NH ROUTE 28 over SUNCOOK RIVER									
BARRIER LAYOUT BR NO 131/108									BRIDGE SHEET
REVISIONS AFTER PROPOSAL				BY	DATE		BY	DATE	14 OF 14
				DESIGNED	SMG	10/17	CHECKED	JAT	7/18
				DRAWN	SMG	10/17	CHECKED	JAT	7/18
				QUANTITIES	SMG	7/18	CHECKED	JAT	7/18
				ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
				REV. DATE		-----		18	23



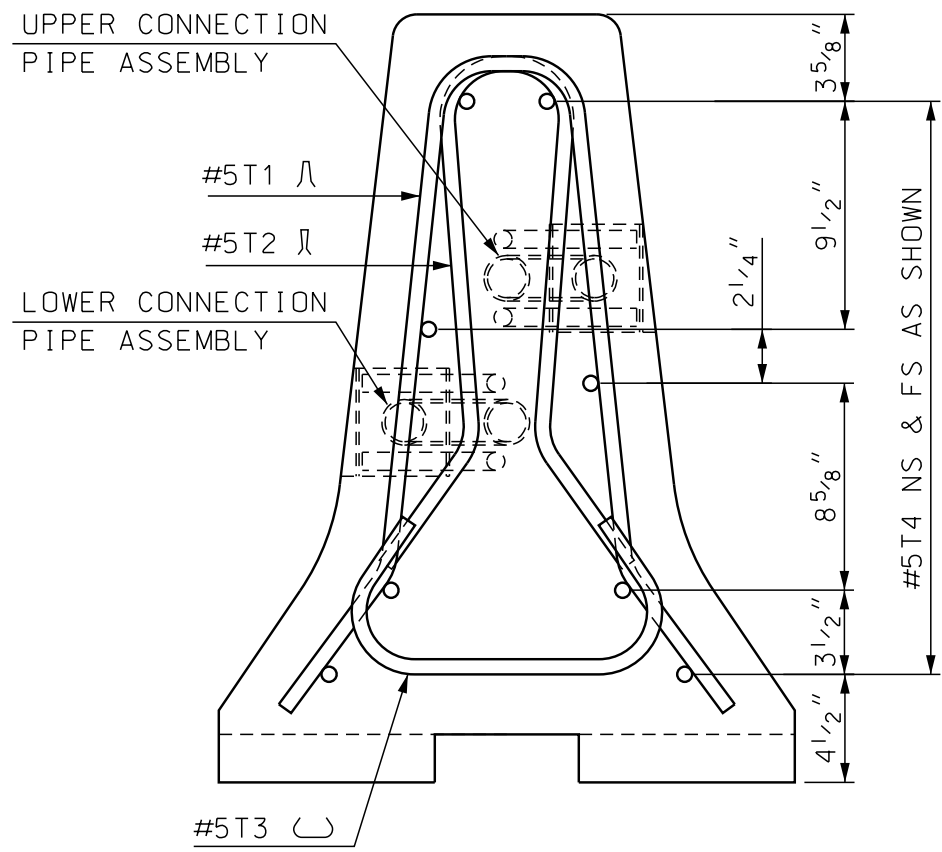




END VIEW
SCALE: 1 1/2" = 1'-0"



ELEVATION
SCALE: 1 1/2" = 1'-0"



SECTION A-A
SCALE: 1 1/2" = 1'-0"

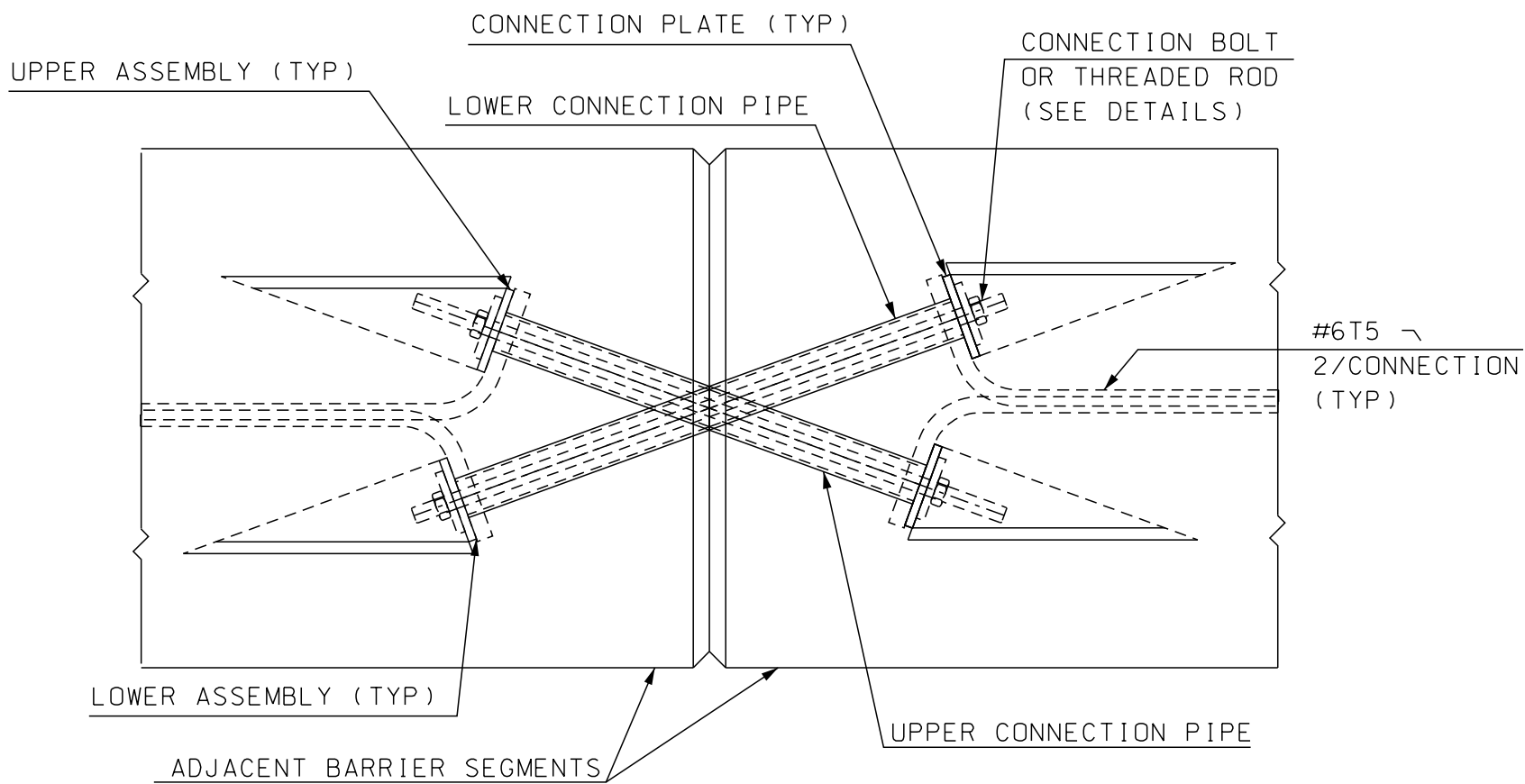
GENERAL NOTES:

- PORTABLE CONCRETE BARRIER SHALL BE FURNISHED BY THE CONTRACTOR AND PAID FOR AS ITEM 606.41741, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE). CONCRETE BARRIER AND ALL ATTACHMENTS SHALL BE FABRICATED IN ACCORDANCE WITH SPECIAL PROVISIONS. ALL BARRIER UNITS SHALL BE 10' LONG.
- PORTABLE CONCRETE BARRIER DETAILS, AS SHOWN ON THESE PLANS, ARE IN COMPLIANCE WITH REQUIREMENTS PER UPDATED NCHRP REPORT 350 FOR TEST NO 3-11 (MASH TEST LEVEL 3), CRASH TESTED BY TEXAS A&M UNIVERSITY SYSTEM, MAY 2005, AND ACCEPTED PER REPORT FHWA/TX-05/0-4692-1.
- THE BARRIER HAS BEEN CRASH TESTED WITH A 27" DYNAMIC DEFLECTION WHICH WILL ALLOW THE BARRIER TO BE PLACED A MINIMUM 12" FROM THE EDGE OF THE DECK.
- USAGE OF THE TEXAS X-BOLT BARRIER REQUIRES A MINIMUM OF 100 LINEAR FEET (10 - 10' UNITS). THE X-BOLT BARRIER SHALL EXTEND A MINIMUM OF 50' BEYOND THE BRIDGE AT EACH END, PARALLEL TO THE ROADWAY CENTERLINE. THE ENDS OF THE BARRIER SHALL CONNECT TO THE TRANSITION UNIT AND THEN TO NHDOT PCB FLARED OUT THE REQUIRED CLEAR ZONE AS SHOWN ON SHEET 2 OF 3.
- THE CONNECTION BOLTS AT THE BARRIER JOINTS SHALL BE TIGHTENED TO THE "TURN OF THE NUT" METHOD IN ACCORDANCE WITH SECTION 550.3.11.6.4 OF NHDOT STANDARD SPECIFICATIONS. AFTER INSTALLATION, ALL X-BOLT JOINTS SHALL BE CHECKED BY THE CONTRACT ADMINISTRATOR CONFIRMING THEY MEET THE TIGHTENED REQUIREMENT.
- THE TEXAS X-BOLT BARRIER MAY BE INSTALLED WITH A 125' MINIMUM RADIUS OF CURVATURE AND A RELATIVE ANGLE OF 4 DEGREES BETWEEN THE 10' UNITS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL APPROVED RETROREFLECTIVE DELINEATORS AT 25-FOOT INTERVALS ALONG TOP AND/OR ONE FOOT DOWN THE SIDE OF PORTABLE CONCRETE BARRIER, SUBSIDIARY TO ITEM 606.41741 (SEE STANDARD NO. DL-1 OF NHDOT STANDARD PLANS FOR ROAD CONSTRUCTION). THE COLOR OF THE DELINEATORS SHALL, IN ALL INSTANCES, CONFORM TO THE COLOR OF THE EDGE LINE MARKINGS. DELINEATOR SUPPLEMENT, BUT DO NOT REPLACE, THE NEED FOR RETROREFLECTIVE SOLID EDGE LINE MARKINGS.

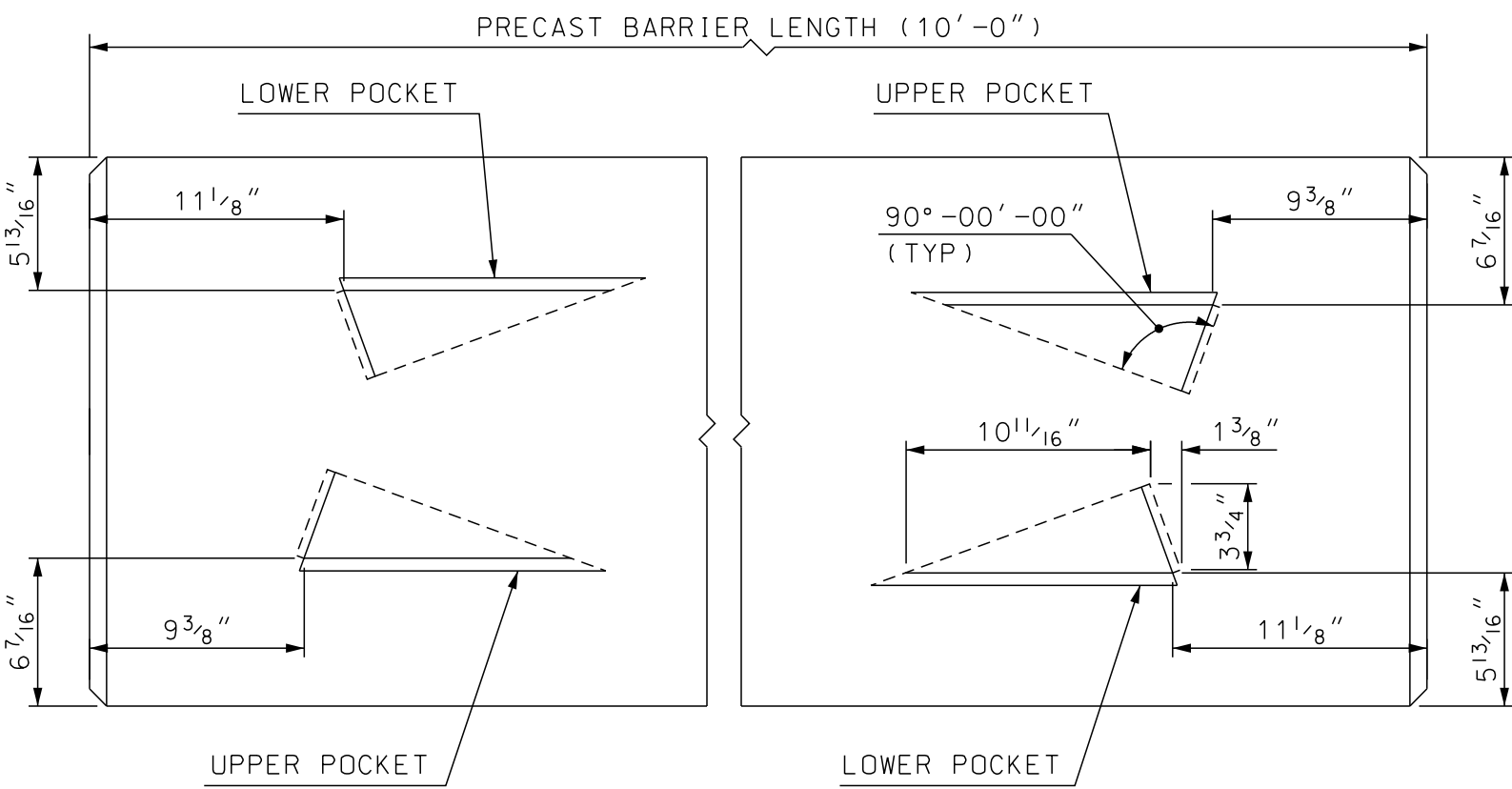
MATERIAL NOTES:

- BARRIERS SHALL BE LIGHT COLORED CLASS AA CONCRETE, WITH COMPRESSIVE STRENGTH OF 4000 psi, AND SHALL HAVE A SMOOTH UNIFORM SURFACE FREE OF DEFECTS AND IRREGULARITIES. CASTING DATE SHALL BE SHOWN ON BARRIER. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4", UNLESS OTHERWISE NOTED.
- ALL REINFORCING STEEL SHALL BE AASHTO M31 (ASTM A615) GRADE 60. ALL REINFORCEMENT SHALL HAVE 1 3/4" MINIMUM CLEAR COVER, UNLESS OTHERWISE NOTED.
- CONNECTION BOLTS SHALL BE 7/8" Φ GALVANIZED HIGH STRENGTH THREADED RODS CONFORMING TO ASTM A325. STEEL PIPES, PLATE WASHERS, AND CONNECTION PLATES SHALL BE GALVANIZED ASTM A36 STEEL.
- ALL STEEL FOR CONNECTIONS SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 550.

NOTE: CONNECTION HARDWARE SHALL NOT EXTEND BEYOND THE CONCRETE FACE OF BARRIER



TYPE X JOINT CONNECTION DETAILS
SCALE: 1 1/2" = 1'-0"

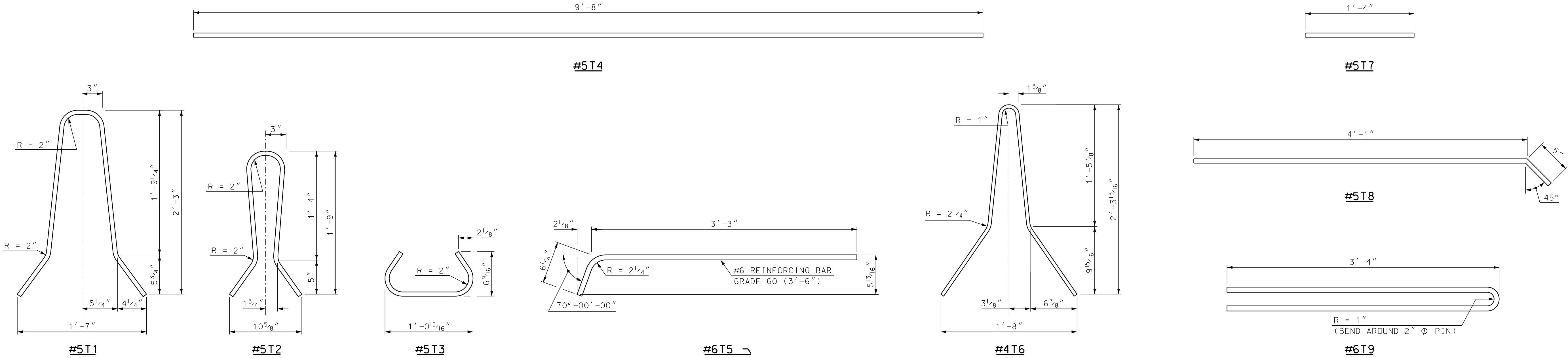
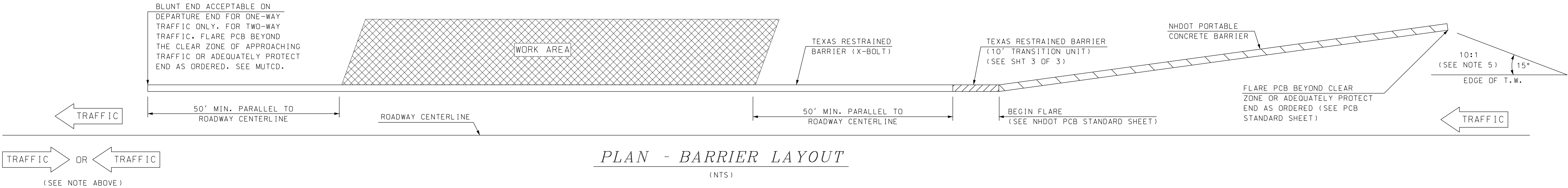


TOP VIEW CONNECTION POCKETS
SCALE: 1 1/2" = 1'-0"

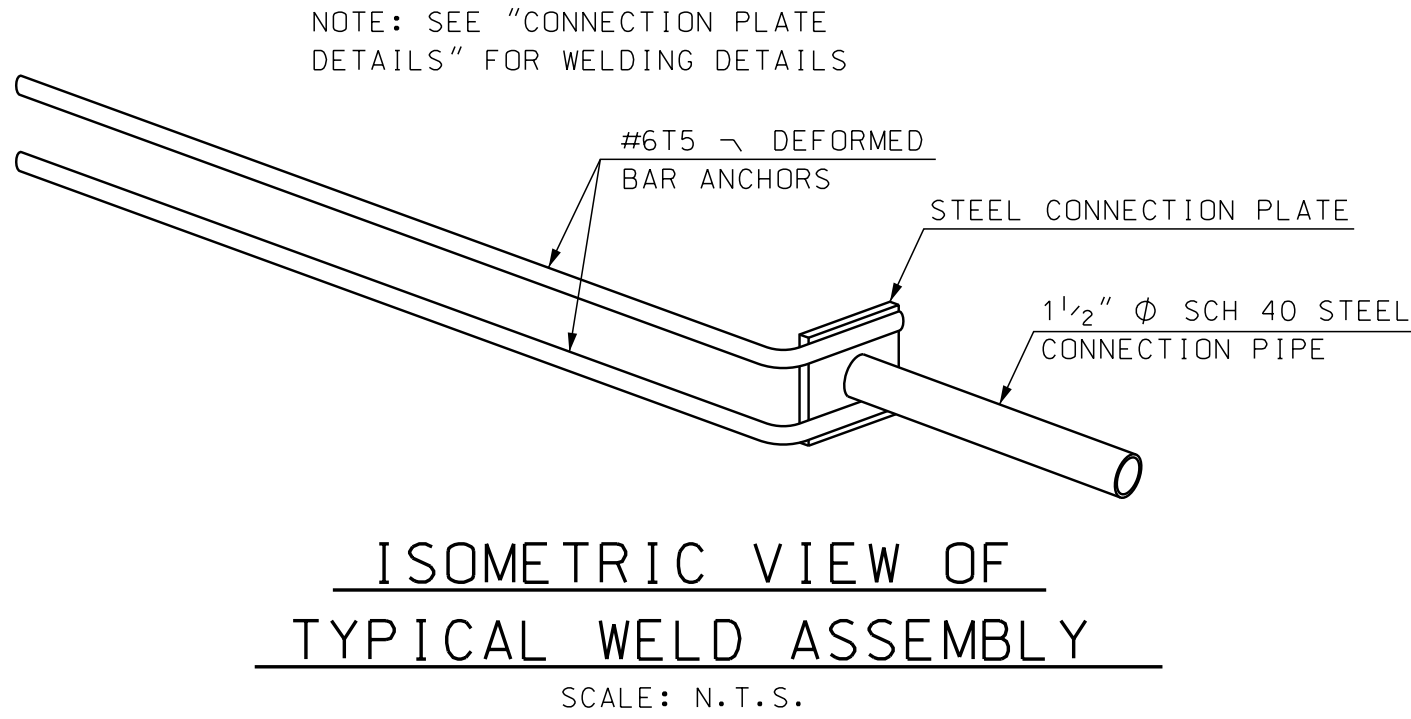
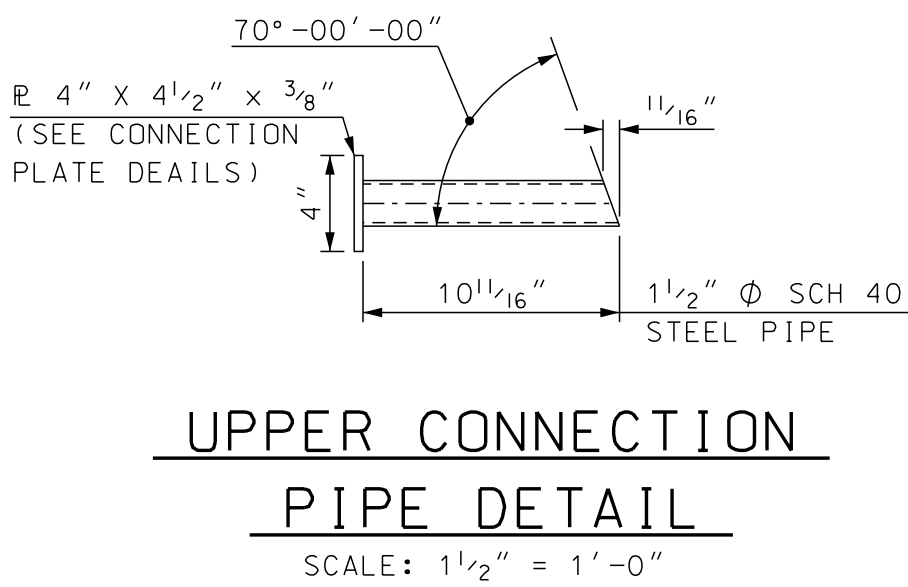
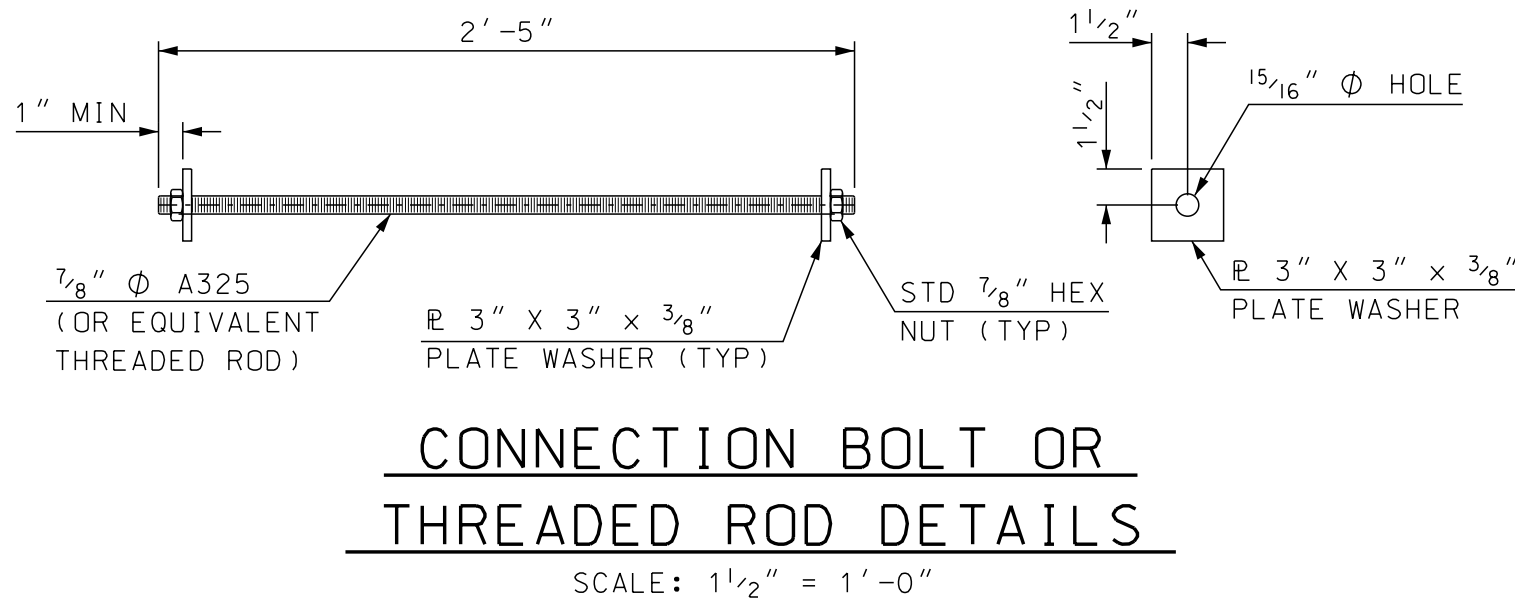
BARRIER WEIGHT APPROX. 2.38 TONS

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC\	X-BoltBarrier	AS NOTED

STATE OF NEW HAMPSHIRE																
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN																
TOWN	BARNSTEAD		BRIDGE NO.		097/089, 131/108STATE PROJECT			41301								
LOCATION NH ROUTE 28 over BEAUTY HILL RD & SUNCOOK RIVER																
TEXAS RESTRAINED BARRIER (X-BOLT) (1 OF 3)								BRIDGE SHEET								
REVISIONS AFTER PROPOSAL					BY		DATE		BY		DATE					
					DESIGNED		TXDOT		12/10		CHECKED		NHDOT		4/18	
					DRAWN		GMC		1/18		CHECKED		NHDOT		4/18	
					QUANTITIES		SMG		7/18		CHECKED		JAT		7/18	
					ISSUE DATE		5/15/18		FEDERAL PROJECT NO.				SHEET NO.		TOTAL SHEETS	
					REV. DATE				-----				21		23	

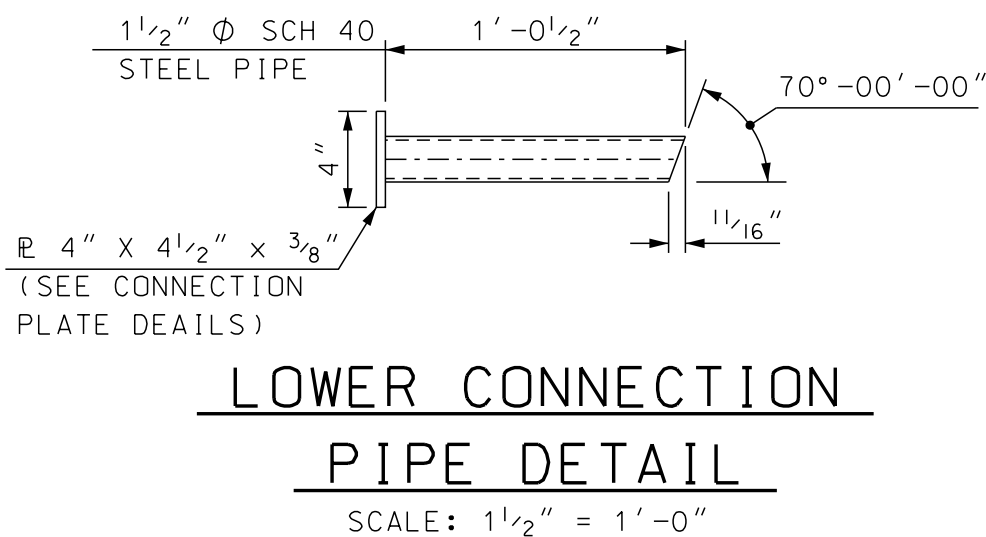
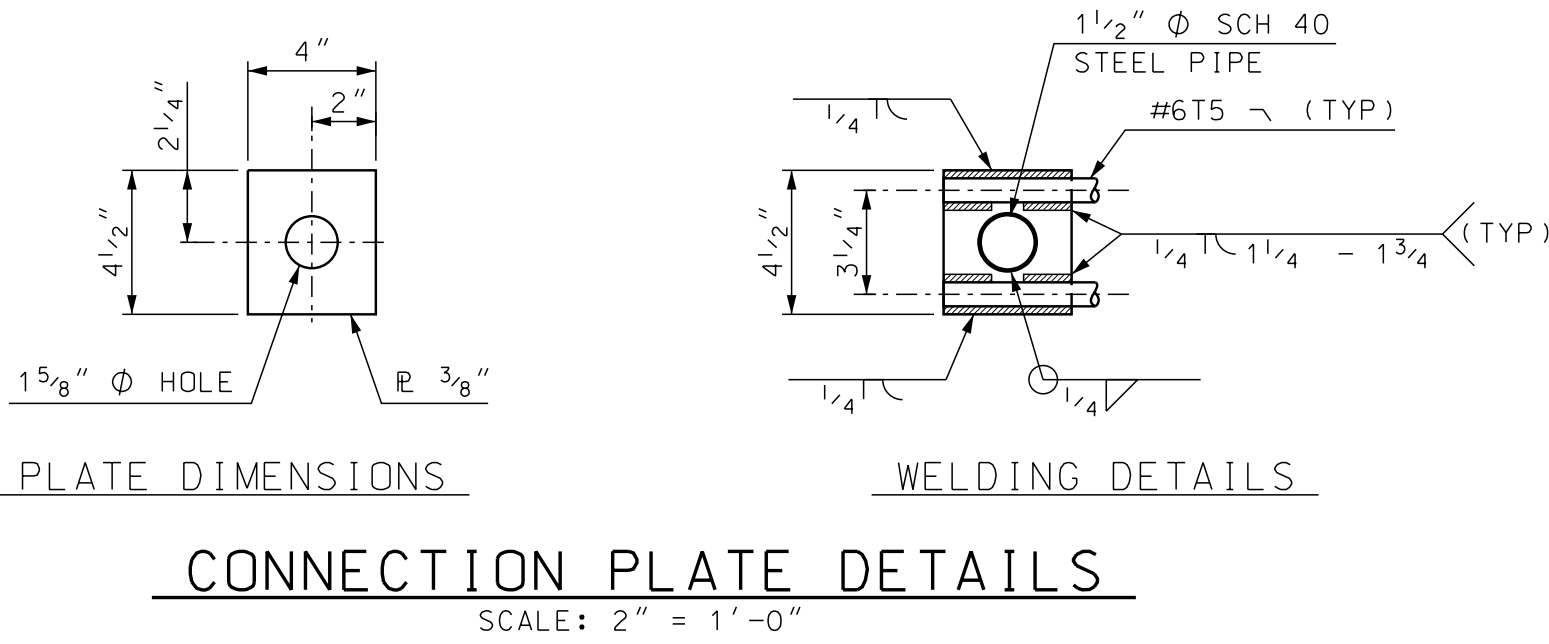


BENDING SCHEDULE
SCALE: 1 1/2" = 1'-0"



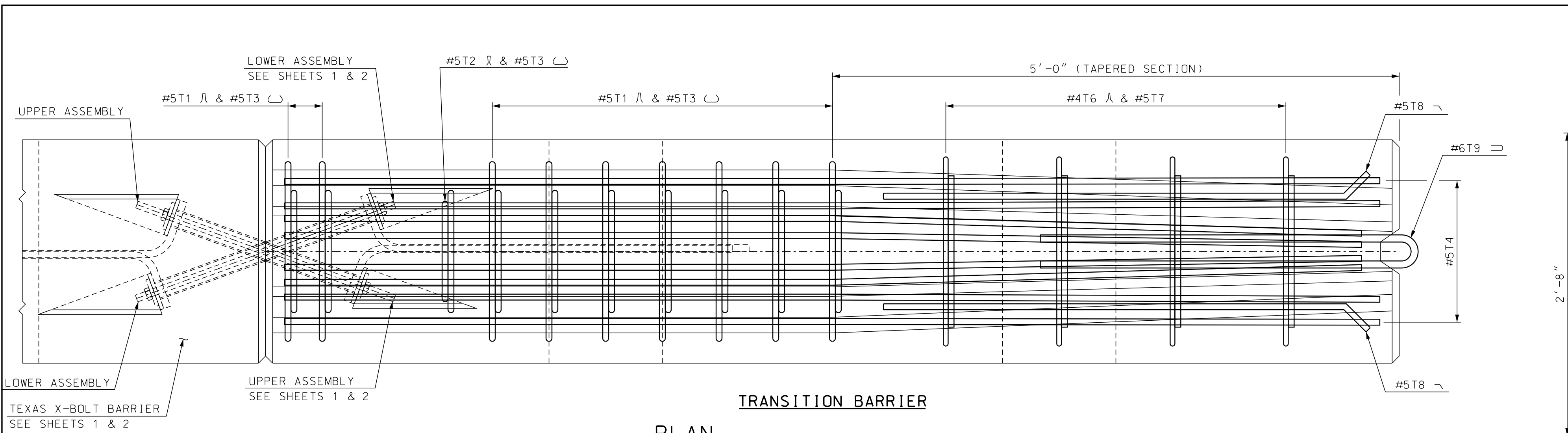
REBAR SCHEDULE TEXAS X-BOLT (10' BARRIER)				
MK		QTY	LENGTH	
T1	#5	17	5'-2"	
T2	#5	2	4'-0"	
T3	#5	19	2'-1"	
T4	#5	8	9'-8"	
T5	#6	8	3'-9"	

REBAR SCHEDULE TRANSITION (10' BARRIER)				
MK		QTY	LENGTH	
T1	#5	9	5'-2"	
T2	#5	1	4'-0"	
T3	#5	10	2'-1"	
T4	#5	8	9'-8"	
T5	#6	4	3'-9"	
T6	#4	4	5'-2"	
T7	#5	4	1'-4"	
T8	#5	2	4'-6"	
T9	#6	3	6'-10"	

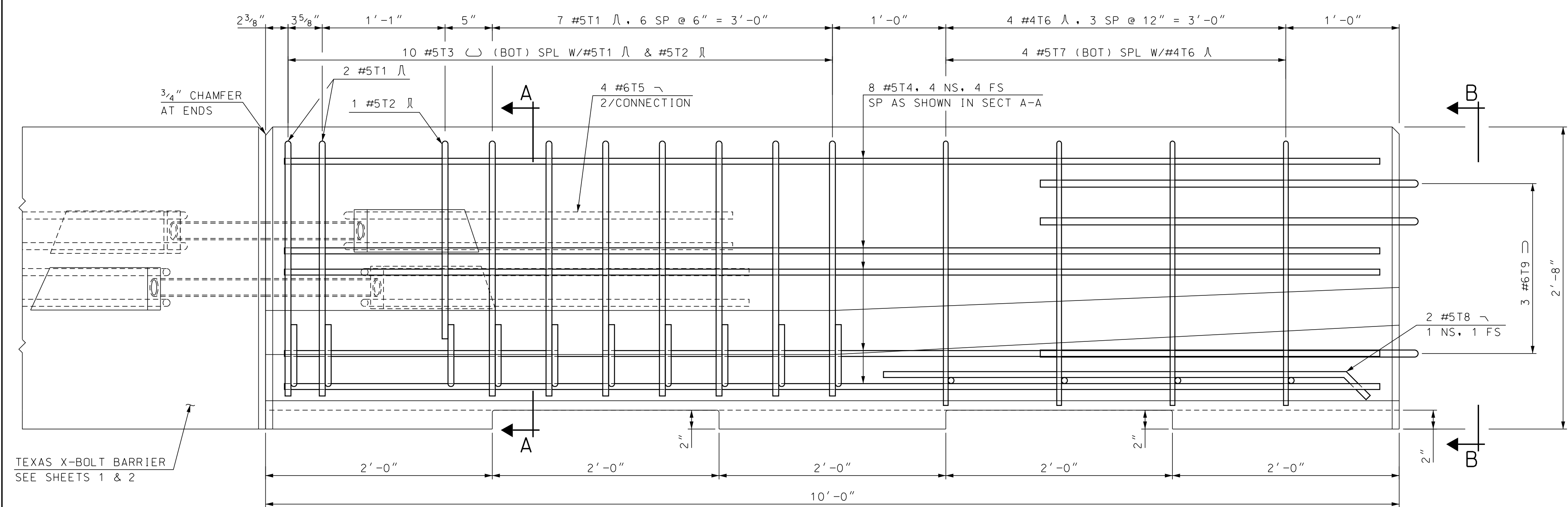


STATE OF NEW HAMPSHIRE											
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN											
TOWN		BARNSTEAD		BRIDGE NO.		097/089, 131/108		STATE PROJECT		41301	
LOCATION										NH ROUTE 28 over BEAUTY HILL RD & SUNCOOK RIVER	
TEXAS RESTRAINED BARRIER (X-BOLT) (2 OF 3)										BRIDGE SHEET	
REVISIONS AFTER PROPOSAL						BY		DATE		--- OF ---	
						DESIGNED		TXDOT		12/10	
						CHECKED		NHDOT		4/18	
						DRAWN		GMC		1/18	
						CHECKED		NHDOT		4/18	
						QUANTITIES		SMG		7/18	
						CHECKED		JAT		7/18	
						ISSUE DATE				5/15/18	
						FEDERAL PROJECT NO.				SHEET NO.	
						REV. DATE				-----	
										22	
										23	

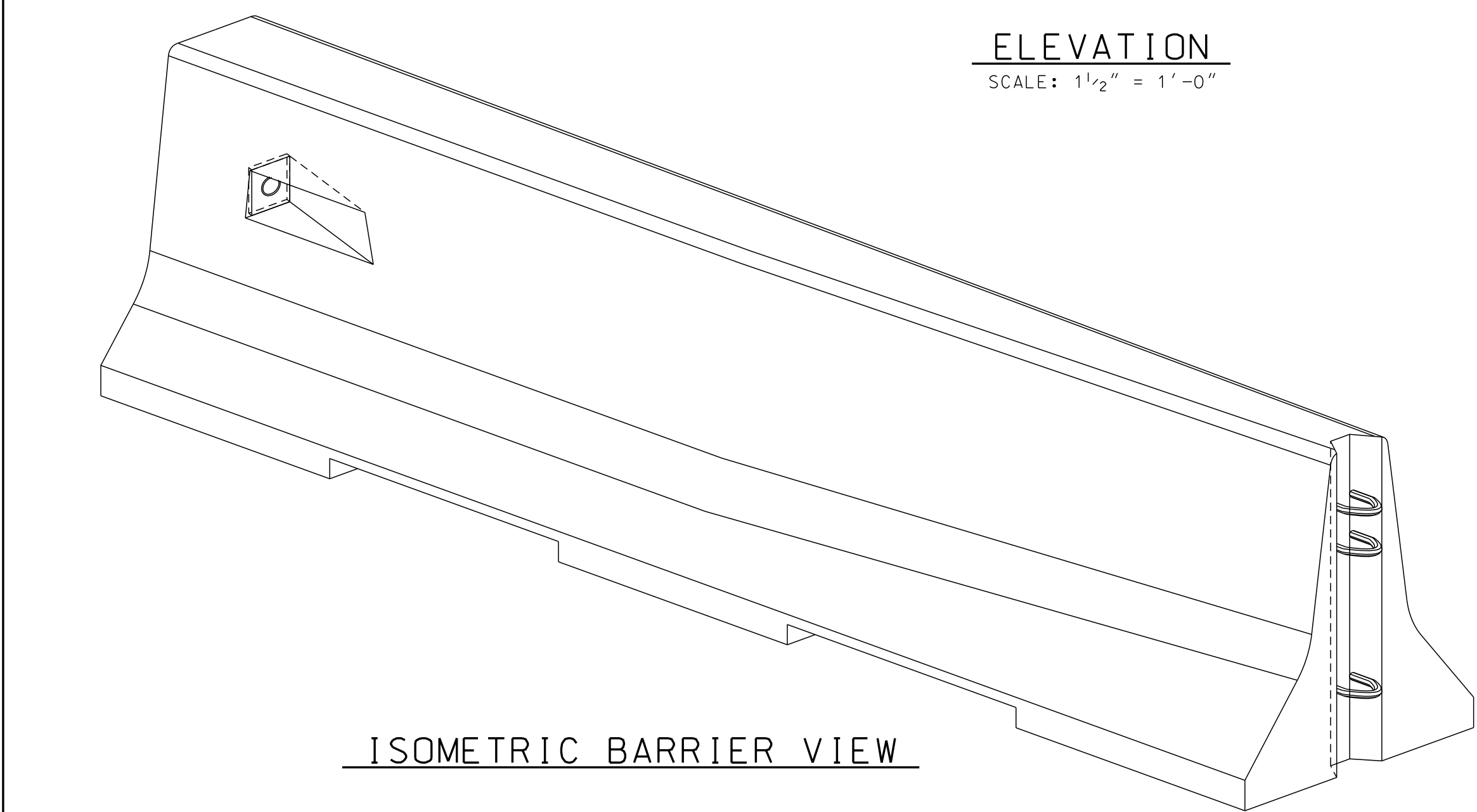
SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC\	X-BoltBarrier	AS NOTED



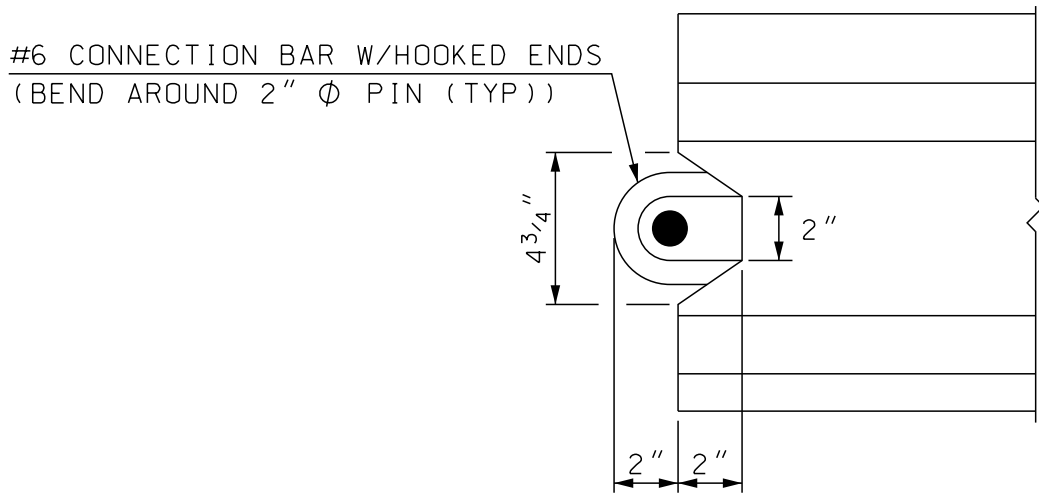
TRANSITION BARRIER
PLAN
SCALE: 1 1/2" = 1'-0"



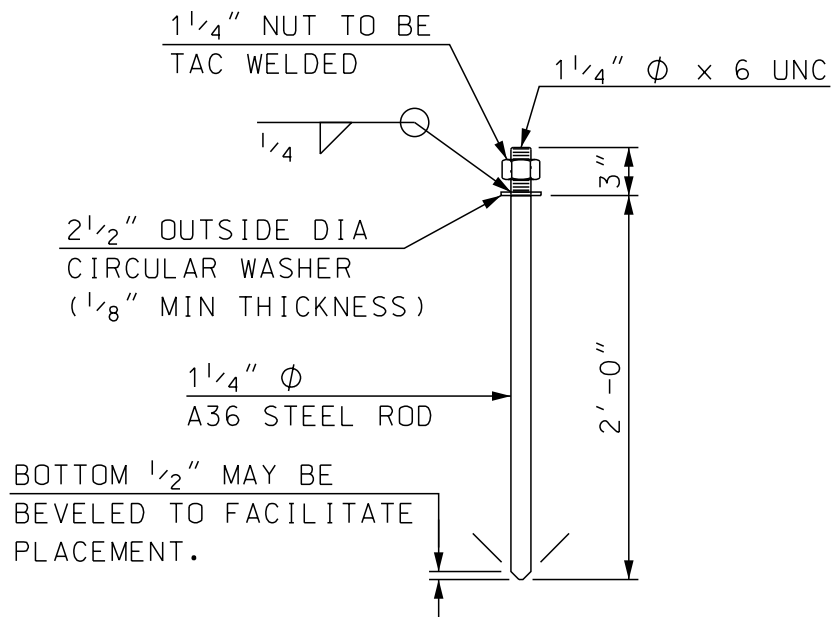
TRANSITION BARRIER
ELEVATION
SCALE: 1 1/2" = 1'-0"



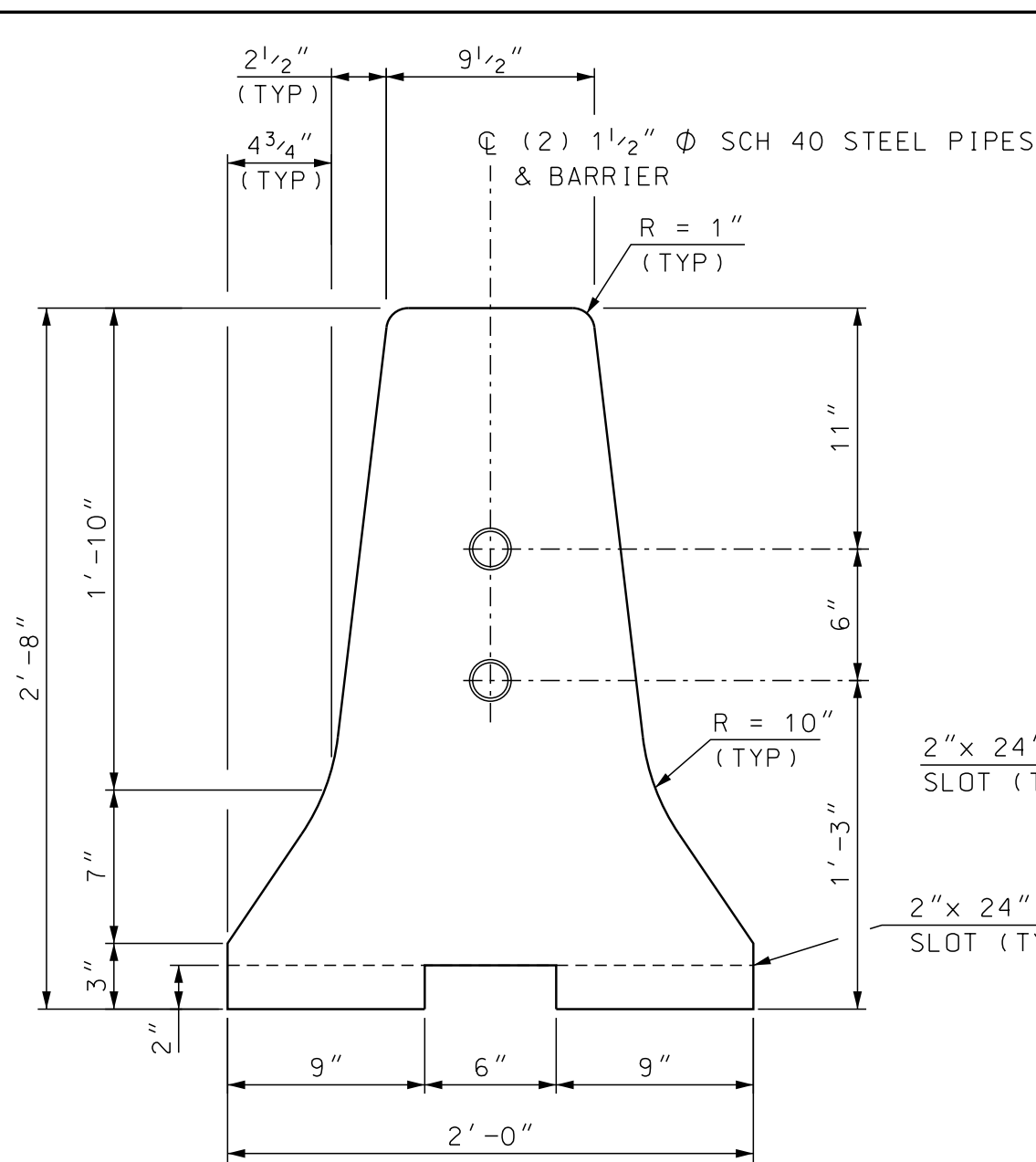
ISOMETRIC BARRIER VIEW



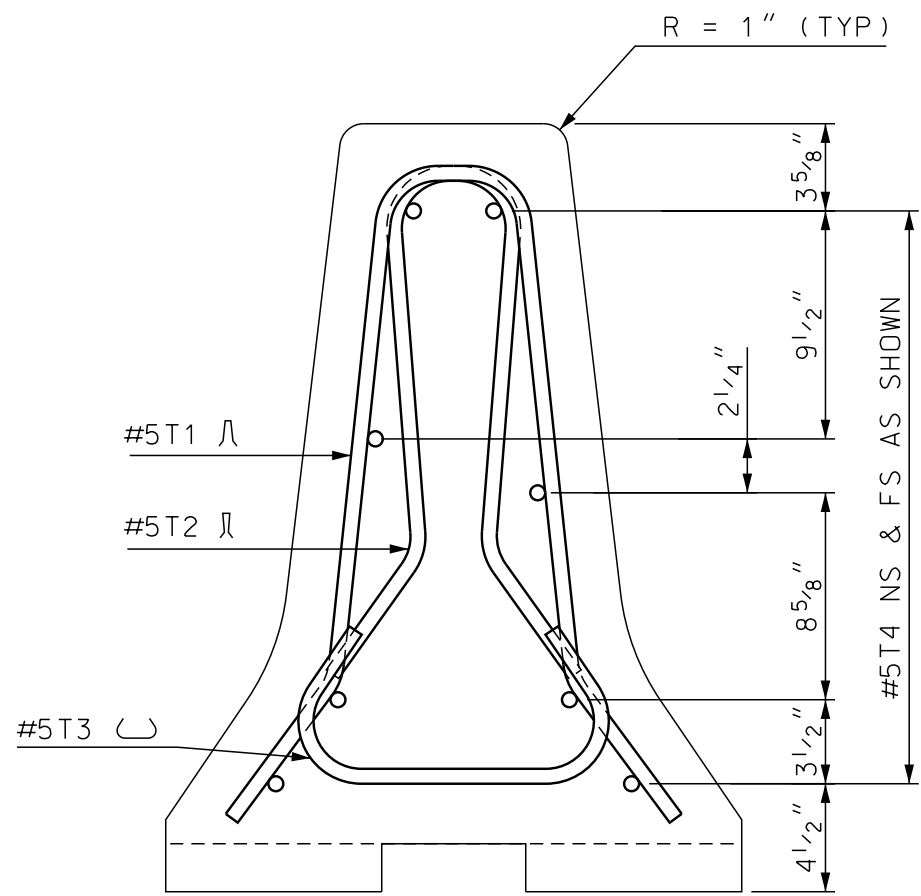
END NOTCH DETAIL
(AT VIEW B-B)
SCALE: 2" = 1'-0"



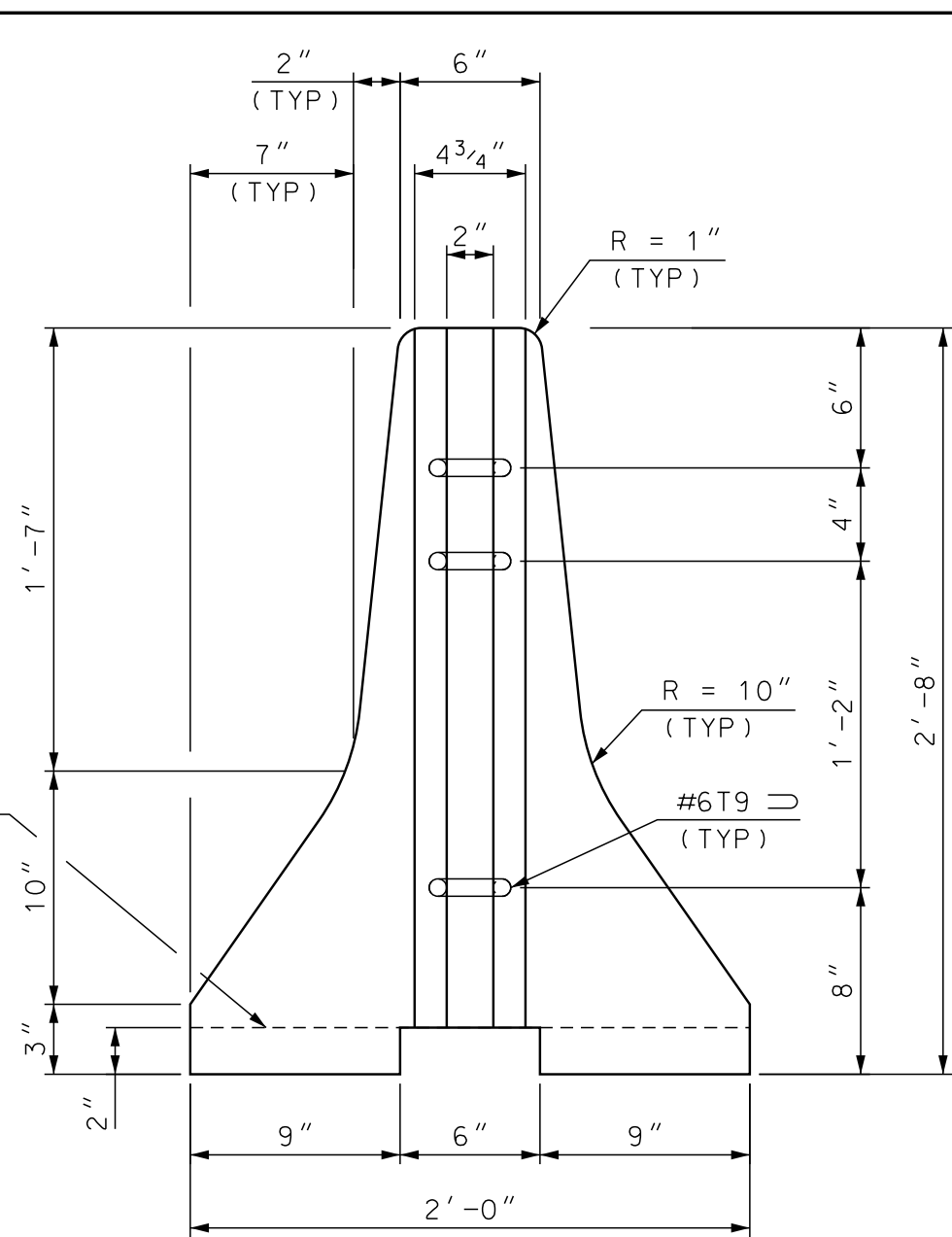
CONNECTOR PIN ASSEMBLY
SCALE: 1" = 1'-0"



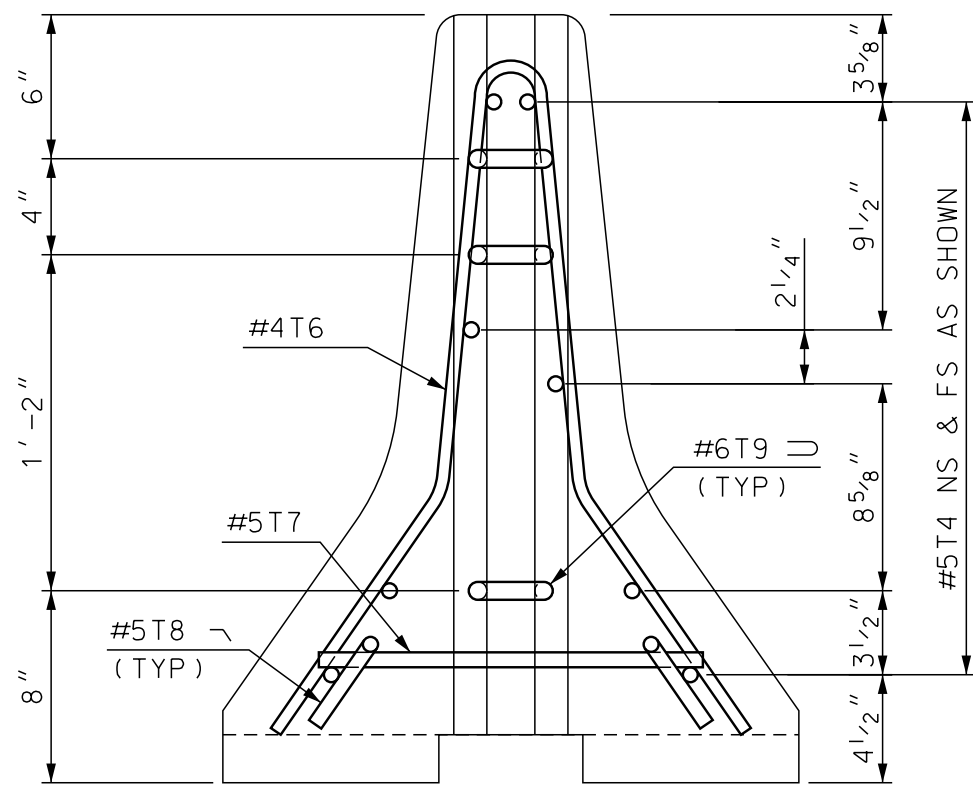
END VIEW SECTION A-A
SCALE: 1 1/2" = 1'-0"



SECTION A-A
SCALE: 1 1/2" = 1'-0"



VIEW B-B
SCALE: 1 1/2" = 1'-0"



VIEW B-B
SCALE: 1 1/2" = 1'-0"

NOTES

- TEXAS RESTRAINED BARRIER (TRANSITION UNIT) SHALL BE PAID FOR UNDER ITEM 606.41741, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE).
- SEE SHEET 1 OF 3 FOR NOTES AND SHEET 2 OF 3 FOR REBAR SCHEDULE.

BARRIER WEIGHT APPROX. 2.28 TONS

STATE OF NEW HAMPSHIRE										
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN										
TOWN	BARNSTEAD		BRIDGE NO.		097/089, 131/108		STATE PROJECT		41301	
LOCATION NH ROUTE 28 over BEAUTY HILL RD & SUNCOOK RIVER										
TEXAS RESTRAINED BARRIER (X-BOLT) (3 OF 3)								BRIDGE SHEET		
REVISIONS AFTER PROPOSAL					BY DATE		BY DATE		--- OF ---	
					DESIGNED TXDOT 12/10		CHECKED NHDOT 4/18		FILE NUMBER 134-4-1	
					DRAWN GMC 1/18		CHECKED NHDOT 4/18			
					QUANTITIES SMG 7/18		CHECKED SMG 7/18			
			ISSUE DATE 5/15/18		FEDERAL PROJECT NO.			SHEET NO.		TOTAL SHEETS
			REV. DATE		-----			23		23

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC\	X-BoltBarrier	AS NOTED